BISHOPVILLE TRUCK ROUTE PROJECT

PROJECT NO. P033261

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared for the:
South Carolina Department of Transportation
and Federal Highway Administration

MARCH 2022

Bishopville
Truck Route

SCDOT®
South Carolina Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

FHWA-SC-EIS-22-01-D

Bishopville Truck Route Project, Lee County, Project No. P033261
Draft Environmental Impact Statement

Submitted Pursuant to 42 U.S.C. 4332(2)(c) by the U.S. Department of Transportation, Federal Highway Administration, and South Carolina Department of Transportation, in cooperation with the U.S. Army Corps of Engineers

3/3/2022
Date of Approval

David P. Kelly
South Carolina Department of Transportation

3/8/2022
Date of Approval

Emily O Lawton
Federal Highway Administration

The following individuals may be contacted for additional information concerning the project:

Mr. Shane Belcher
Lead Environmental Protection Specialist
Federal Highway Administration
1835 Assembly Street
Suite 1270
Columbia, SC 29201
(803) 253-3187

Mr. Jacob Meetze, P.E.
Project Manager
South Carolina Department of Transportation
PO Box 191
955 Park Street
Columbia, SC 29202
(803) 737-1037

This Draft Environmental Impact Statement (DEIS) describes the Federal Highway Administration (FHWA) and South Carolina Department of Transportation (SCDOT) proposal to provide trucks with an alternate route to traveling through Bishopville in Lee County, South Carolina. The primary purpose of the proposed Bishopville Truck Route Project is to address truck traffic traveling through downtown Bishopville, and the secondary purpose is to enhance the economic development of the area. Twelve build alternatives and a no-build alternative are evaluated in detail in the DEIS. The Notice of Intent for this project predates the 2020 updates to the Council on Environmental Quality regulations that went into effect on September 14, 2020. Therefore, language primarily related to direct, indirect, and cumulative impacts remains within certain sections of the document.

The lead agencies, FHWA and SCDOT, recommend Alternative 6 as the Preferred Alternative, as it would best meet the project's purpose and need while minimizing impacts on the natural and human environments. It is the intent of the FHWA to issue a single document that consists of the Final Environmental Impact Statement and Record of Decision pursuant to Public Law 112-141, 126 Stat. 405, Section 1319(b), unless the FHWA determines statutory considerations preclude issuance of the combined document pursuant to Section 1319.

Comments on this DEIS are due by May 9, 2022. Comments can be submitted via email (MeetzeJ@scdot.org), via the project website (https://www.scdot.org/inside/BishopvilleTruckRoute/), or sent to the following address:

Bishopville Truck Route Project
c/o South Carolina Department of Transportation
Jacob Meetze, P.E.
Project Manager
PO Box 191
Columbia, SC 29202-0191

Date: 03/03/2022	NEPA ENVIRONMENTAL COMMITMENTS FORM	

Project ID: P033261 | County: Lee | District: 2 | Doc Type: EIS | Total # of Commitments: 18

Project Name: Bishopville Truck Route Project

The Environmental Commitment **Contractor Responsible** measures listed below **are to be included in the contract and must be implemented**. It is the responsibility of the Program Manager to make sure the Environmental Commitment **SCDOT Responsible** measures are adhered to. If there are questions regarding the commitments listed, please contact:

CONTACT NAME: Jacob Meetze, P.E. **PHONE #:** (803) 737-1037

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Non-Standard Commitment | NEPA Doc Ref: Chapter 4, Section 4.2.5 | Responsibility: SCDOT

Farming

SCDOT will coordinate with farm owners regarding irrigation systems (e.g., pivot point locations) during the preliminary design to minimize impacts to farmland operations.

☐ Special Provision

Non-Standard Commitment | NEPA Doc Ref: Chapter 4, Section 4.3.4 | Responsibility: SCDOT/CONTRACTOR

Socioeconomics and Communities

During construction, SCDOT will coordinate with emergency service providers, schools, and other community resources that may be affected by construction activities to minimize construction impacts.

Construction operations would be scheduled for off-peak hours when reasonable/feasible.

☐ Special Provision

Displacements | NEPA Doc Ref: Chapter 4, Section 4.3.4 | Responsibility: SCDOT

SCDOT will acquire all new right-of-way and process any relocations in compliance with the *Uniform Relocation Assistance and Real Property Acquisition Act of 1970*.

☐ Special Provision

Project ID: P033261	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	SCDOT ENVIRONMENTAL SERVICES

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Noise	NEPA Doc Ref: Chapter 4, Section 4.4.8	Responsibility: CONTRACTOR

Construction noise would be subject to compliance with local noise regulations/ordinances. Powered construction equipment shall not be operated during the traditional evening and/or sleeping hours within 150 feet of a noise-sensitive site (e.g., residences, schools, preschools, daycares, places of worship, hospitals, retirement homes, parks, campgrounds, and apartment complex pools), to be decided either by local ordinances and/or agreement with the SCDOT. The public would be notified and afforded the opportunity to provide comments before the use of powered construction equipment being operated adjacent to residential communities during the evening and/or sleeping hours.

☐ Special Provision

Noise	NEPA Doc Ref: Chapter 4, Section 4.4.8	Responsibility: SCDOT

Upon FHWA approval of the combined Final Environmental Statement/Record of Decision (FEIS/ROD), SCDOT will comply with 23 CFR 772.17: Information for Local Officials.

☐ Special Provision

Non-Standard Commitment	NEPA Doc Ref: Chapter 4, Section 4.5.7	Responsibility: SCDOT/CONTRACTOR

Air Quality

The contractor will ensure all construction equipment is properly tuned and maintained and will minimize idling time to save fuel and reduce emissions.

☐ Special Provision

Project ID: P033261	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	SCDOT ENVIRONMENTAL SERVICES

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Individual Permit	NEPA Doc Ref: Chapter 4, Section 4.6.4	Responsibility: SCDOT

Impacts on jurisdictional waters will be permitted under a Section 404 permit from the US Army Corps of Engineers (USACE). Based on the preliminary design, it is anticipated that the proposed project would be permitted under a USACE Individual Permit. SCDOT will provide the USACE with information regarding any proposed activities during the Section 404 permitting process. The required mitigation for this project will be determined through consultation with the USACE and other agencies.

Compensatory mitigation for permanent stream and wetland impacts would be obtained through a combination of mitigation bank credits and/or permittee responsible mitigation.

☐ Special Provision

Water Quality	NEPA Doc Ref: Chapter 4, Section 4.6.4	Responsibility: SCDOT

A Section 401 State Water Quality Certification would be required and will be completed during the Joint 404/401 permit process.

☐ Special Provision

Water Quality	NEPA Doc Ref: Chapter 4, Section 4.6.4	Responsibility: SCDOT/CONTRACTOR

The contractor will be required to minimize possible water quality impacts through the implementation of Best Management Practices (BMPs), policies in 23 CFR 650B, and the Department's *Supplemental Specification on Erosion Control Measures and Supplemental Technical Specifications on Seeding*. Measures may include seeding, silt fences, sediment basins, etc., as appropriate.

SCDOT would mitigate stormwater runoff by discharging stormwater into appropriately designed BMPs before being released into receiving waters.

A project-specific *Stormwater Pollution Prevention Plan* (SWPPP) will be developed and a Section 402 National Pollutant Discharge Elimination System (NPDES) permit will be obtained before initiating land-disturbing activities.

☐ Special Provision

Project ID: P033261	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	SCDOT ENVIRONMENTAL SERVICES

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Floodplains | NEPA Doc Ref: Chapter 4, Section 4.7.5 | Responsibility: SCDOT

The project would be designed to meet "No-Rise" requirements in regulatory floodplains containing Zone AE floodways. In the event a "No-Rise" condition cannot be achieved, coordination with the Federal Emergency Management Agency (FEMA) would require the preparation of a Conditional Letter of Map Revision (CLOMR)/Letter of Map Revision (LOMR) package.

Where other regulatory floodplains are defined, hydraulic structures would be designed to limit base flood elevation (BFE) increases to less than one foot and provide clearances above the BFE per SCDOT requirements. Where no regulatory floodplain is defined, culverts and bridges would be designed to accommodate a 50-year or greater magnitude flood event.

☐ Special Provision

Non-Standard Commitment | NEPA Doc Ref: Chapter 4, Section 4.7.5 | Responsibility: SCDOT

Water Resources

Detailed hydraulic and hydrologic studies for the proposed hydraulic crossings will be performed during final design to determine the correct sizing of bridge and culverts.

☐ Special Provision

Migratory Bird Treaty Act | NEPA Doc Ref: Chapter 4, Section 4.8.5.1 | Responsibility: CONTRACTOR

The federal *Migratory Bird Treaty Act of 1918*, 16 USC 703-711, states that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. The SCDOT will comply with the *Migratory Bird Treaty Act of 1918* to prevent the unlawful taking or killing of migratory birds and the unauthorized destruction of their active nests. Active nests are defined as nests that contain eggs and/or juvenile birds; the nest is considered active until all juvenile birds permanently leave the nest.

The contractor will notify the Resident Construction Engineer (RCE) at least four (4) weeks before starting work on bridges and box culverts. If an active migratory bird nest is discovered at any time, the contractor will cease work immediately on the structure and notify the RCE. The RCE will notify the Environmental Services Office (ESO) Compliance Division to determine the next course of action. The contractor shall not take/kill a migratory bird or remove/disturb an active migratory bird nest.

☐ Special Provision

Project ID: P033261	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	SCDOT ENVIRONMENTAL SERVICES

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Cultural Resources	NEPA Doc Ref: Chapter 4, Section 4.9.5	Responsibility: CONTRACTOR

During construction, the contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations. If any such remains are encountered, the RCE and SCDOT's Construction Manager would be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise. If previously unknown tribal artifacts, items of cultural significance, and/or human remains are discovered during construction, the resources will be handled according to 36 CFR 800.11 in coordination with the State Historic Preservation Office (SHPO) and appropriate Tribal Historic Preservation Office (THPO).

☐ Special Provision

USTs/Hazardous Materials	NEPA Doc Ref: Chapter 4, Section 4.10.5	Responsibility: SCDOT/CONTRACTOR

Before right-of-way acquisition, a hazardous materials site assessment will be performed to determine levels of contamination at any potentially hazardous materials sites near the Preferred Alternative. In addition, a hazardous waste management plan will be prepared for the handling of hazardous materials during construction, including an on-site health and safety plan for construction activities and plans to dispose of waste materials in approved landfills. If avoidance of hazardous materials is not a viable alternative and soils that appear to be contaminated are encountered during construction, the South Carolina Department of Health and Environmental Control (SCDHEC) should be informed. Hazardous materials would be tested and removed and/or treated in accordance with the United States Environmental Protection Agency (EPA) and the SCDHEC requirements.

☐ Special Provision

Non-Standard Commitment	NEPA Doc Ref: Chapter 4, Section 4.11.4	Responsibility: SCDOT

Utilities

SCDOT will coordinate with appropriate utility owners during the design of the Preferred Alternative for all utility conflicts, including means to avoid or minimize impacts.

☐ Special Provision

Project ID: P033261	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	SCDOT ENVIRONMENTAL SERVICES

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Non-Standard Commitment	NEPA Doc Ref: Chapter 4, Section 4.12.2.2	Responsibility: SCDOT

Construction

Temporary construction easements may be needed for some properties. SCDOT would temporarily use these properties during construction and would provide compensation to the landowner for the temporary use. The property would be fully returned to the owner when the use of the property is no longer required, typically when construction is complete.

☐ Special Provision

Non-Standard Commitment	NEPA Doc Ref: Chapter 4, Section 4.12.2.3	Responsibility: CONTRACTOR

Construction

A traffic control plan will be developed to minimize interference to traffic flow from construction equipment and activities.

☐ Special Provision

Non-Standard Commitment	NEPA Doc Ref: Chapter 4, Section 4.12.3.1	Responsibility: SCDOT

Transportation

SCDOT will coordinate with the South Carolina Central Railway (SCRF) about proposed railroad crossings during final design.

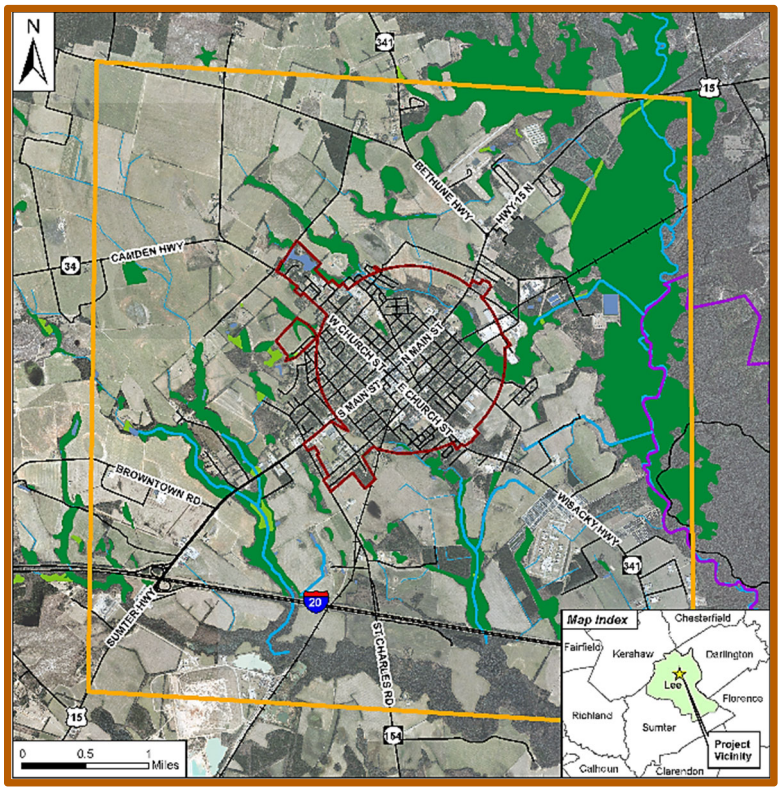
☐ Special Provision

EXECUTIVE SUMMARY

What is the Bishopville Truck Route Project?

The proposed Bishopville Truck Route Project (project) is located in Bishopville in Lee County, South Carolina (**Exhibit ES-1**). The project study area is generally defined by the area bordered by the US 15/ I-20 interchange in the southwest, the intersection of Pinchum Sly Road and Camden Highway (SC 34) in the northwest, US 15 north of Bethune Highway (SC 341) in the northeast, and the intersection of Wisacky Highway (SC 341) and Mac Stuckey Lane in the southeast.

Exhibit ES-1. Project Study Area



There is a long history associated with the project. When the project began in 2010, it was estimated that over 700 large commercial trucks traveled on Main Street (US 15) through downtown Bishopville daily. More recent traffic forecasts estimate that on average, over 1,900 large commercial trucks travel Main Street (US 15) through downtown Bishopville. The proposed project would provide trucks with an alternate route and is considered necessary to reduce truck traffic downtown. The South Carolina Department of Transportation (SCDOT), in cooperation with the Federal Highway Administration (FHWA), is undertaking project-development and preliminary engineering activities for the preparation of a Draft Environmental Impact Statement (DEIS).

What is a Draft Environmental Impact Statement?

This DEIS was prepared in accordance with the *National Environmental Policy Act (NEPA) of 1969,* as amended, which establishes how federally funded projects, including highway projects, are studied and how decisions are made. The process gives decision-makers the information needed to make informed decisions about where and how to implement a project, or whether to proceed at all. A DEIS is the culmination of technical studies and reports, interagency coordination, and community outreach and feedback for reviewers including the public, stakeholders, and decision-makers. The DEIS documents the purpose and need for the project; discusses and analyzes project alternatives; describes the existing conditions of the study area; discloses the potential environmental, transportation, social, and economic impacts; identifies proposed mitigation measures to offset impacts if appropriate; and presents a recommended preferred alternative. It also incorporates analysis and feedback gathered from the public and agencies during the various phases of DEIS development. The DEIS is available for review at the locations and website listed in **Table ES-1**.

How is this document organized?

> ***NEPA***
>
> The *National Environmental Policy Act (NEPA)* establishes the way in which federally funded projects are studied and how decisions are made. The process gives decision-makers information needed to make informed decisions.

Chapter 1 includes a project overview and discusses the project's history and how it would be funded. **Chapter 2** summarizes the purpose and need for the project and provides information on current and future traffic conditions. **Chapter 3** describes the alternative-development, analysis, and screening process, including why certain alternatives were carried forward for detailed analysis and what factors led to the elimination of options; provides data and analyses for recommending a preferred alternative, and recommends a proposed preferred alternative.[1] **Chapter 4** details the existing resources located in the study area related to the human, cultural, natural, and physical environments; analyzes the potential direct, indirect, and cumulative impacts associated with the build alternatives and a no-build alternative; and discusses avoidance, minimization, and/or mitigation measures for potential impacts where appropriate.[2] **Chapter 5** summarizes the public and agency involvement activities from the inception of the project through the development of this DEIS. Public involvement materials are in **Appendix C** and agency coordination materials are in **Appendix D**.

What is the purpose of the project and why is it needed?

The primary purpose of the proposed Bishopville Truck Route Project is to address the existing and future truck traffic traveling through downtown Bishopville. The secondary purpose is to enhance economic development in the area. The project purposes are based on the following needs:

- A need to address the substantial existing and projected truck movement through downtown Bishopville to improve mobility for vehicle and truck traffic in the area;
- A need to augment regional economic development initiatives in Lee County, which has experienced a decline in population and employment for more than a decade.

Main Street (US 15) serves as the primary corridor through downtown Bishopville, which results in substantial heavy truck traffic traveling through downtown. The combination of regional truck movement and daily local commuter traffic hinders traffic flow and generates noise and other negative impacts in the central business district. When the project began in 2010, it was estimated that over 700 large commercial trucks were traveling on Main Street (US 15) through downtown Bishopville every day. In 2015, the SCDOT, in cooperation with the FHWA, oversaw the calibration and validation of a regional travel demand model to develop and evaluate possible alternatives for the project. The results from the travel demand modeling estimated that an average of 1,900 large commercial trucks traveled Main Street (US 15) daily through downtown Bishopville in 2015. The future year (2045) traffic forecasts estimate that an average of 3,200 trucks will travel Main Street (US 15) daily in 2045 (**Appendix A**: *Bishopville Truck Route Project Traffic Analysis Study* [2021]). More information about the purpose and need for the project is in **Chapter 2**.

---

[1] SCDOT and FHWA will consider the analysis presented in this DEIS and all comments and input received to identify a Selected Alternative. The Selected Alternative could be the Preferred Alternative, the No-Build Alternative, or another build alternative. The decision, and responses to comments received, will be published in a combined Final Environmental Impact Statement/Record of Decision.
[2] The Notice of Intent predates the 2020 updates to the Council on Environmental Quality regulations that went into effect on September 14, 2020. Therefore, language primarily related to direct, indirect, and cumulative impacts remains in certain sections of the document.

How were project alternatives developed and evaluated?

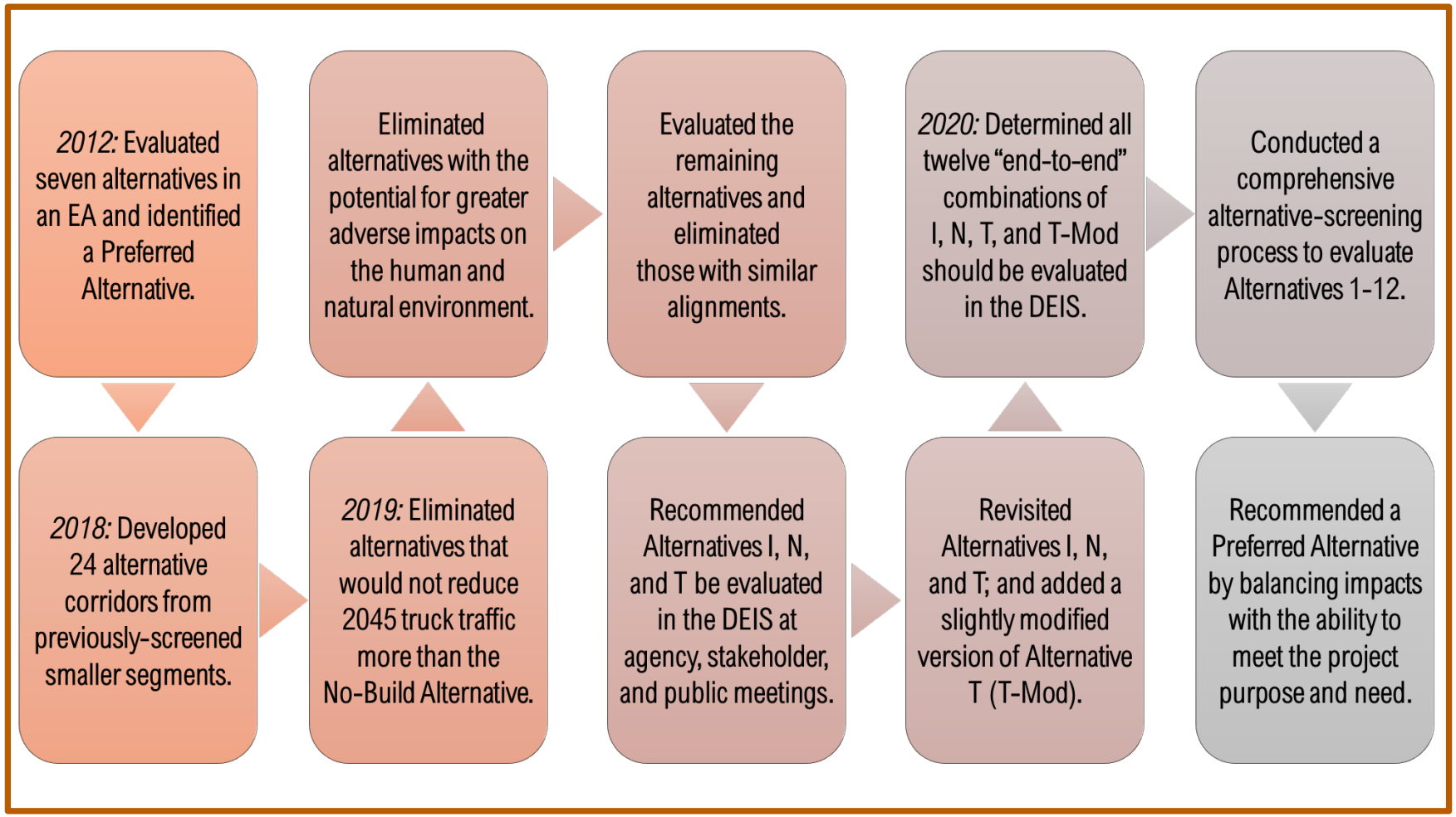
In 2010, SCDOT began preparing an Environmental Assessment (EA), which was approved in September 2012.[3] The EA analyzed seven routes for heavy trucks traveling on Main Street (US 15) through downtown Bishopville and identified a preferred alternative. As a result of opposition to the Preferred Alternative and controversy associated with the project, FHWA informed SCDOT that an EIS would have to be prepared if the Santee-Lynches Regional Council of Governments (SLRCOG) wanted the project to move forward. In 2017, the SLRCOG communicated their desire to proceed with the project and the preparation of an EIS. **Exhibit ES-2** illustrates the process used to evaluate project alternatives and recommend a preferred alternative.

According to 40 CFR 1502.14, the identification, consideration, and analysis of alternatives are key to the *NEPA* process and goal of objective decision-making. The consideration of a range of alternatives leads to a solution that satisfies the need and protects resources. A comprehensive alternative-development and screening process was used to identify a set of reasonable alternatives that satisfy the project's purpose and need while minimizing impacts on the environment. Detailed information about how alternatives were developed and screened can be found in **Chapter 3**. An alternative might be determined as not reasonable and eliminated from further consideration if the alternative does not satisfy the purpose of and need for the project, is determined to be not practical or feasible from a technical and/or economic standpoint, and/or substantially duplicates another alternative. The alternative-development and screening process consisted of the following steps:

1. **Level 1 Screening:** The first-tier screening consisted of assessing 26 conceptual roadway segments and identifying 24 segments to be qualitatively analyzed in second-tier screening.
2. **Level 2 Screening:** The second-tier screening consisted of assessing the previous 24 segments and developing longer quadrant segments that traversed entire quadrants. SCDOT then identified 24 unique "end-to-end" alternatives that would advance to third-tier screening. The development of these alternatives also considered existing and future land use, potential impacts on the natural and built environments, and public input/feedback.
3. **Level 3 Screening:** The SCDOT then conducted a comprehensive alternative-screening process to screen the 24 alternatives (Alternatives A-X) that advanced from second-tier screening. Alternatives that would not reduce truck traffic more than the No-Build Alternative in 2045; alternatives with the potential for greater environmental impacts; and alternatives with similar alignments were eliminated.
4. **Initial Build Alternatives**: From Alternatives A-X, three initial alternatives (Alternatives I, N, and T) anticipated to best meet the project's purpose and need were identified by SCDOT for further evaluation. A modified version of Alternative T was added by SCDOT and FHWA.
5. **Build Alternatives:** SCDOT and FHWA decided to analyze all 12 "end-to-end" combinations of Alternatives I, N, T, and T-Modified; and renamed them Alternatives 1-12. These 12 build alternatives are evaluated in detail in this DEIS.
6. **Preferred Alternative:** In addition to traffic screening factors, including the projected truck traffic downtown in 2045, Alternatives 1-12 and the No-Build Alternative were analyzed using environmental, social, and cost-related screening factors. Based on the analyses presented in this DEIS, SCDOT is proposing Alternative 6 as the Preferred Alternative. However, an alternative will not be selected until after the conclusion of the DEIS comment period.

[3] Available online at: https://www.scdot.org/inside/pdfs/PublicHearings/bishopvilleBypass_EA.pdf.

Exhibit ES-2. Alternative-Development and Screening Process



What build alternatives are being evaluated in this DEIS?

Alternative 1 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 5.5 miles long. It begins at the intersection of Sumter Highway (US 15) and Browntown Road, crosses the South Carolina Central Railroad (SCRF) and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time at an existing crossing, and connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15) (**Exhibit ES-3**).

Alternative 2 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 4.6 miles long. It begins at the intersection of Sumter Highway (US 15) and Browntown Road, crosses St. Charles Road, crosses the SCRF, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and ends at a new intersection with Main Street (US 15) (**Exhibit ES-4**).

Alternative 3 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 4.8 miles long. It begins just southwest of the intersection of Sumter Highway (US 15) and Wilkinson Road, intersects Edgefield Drive, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and connects with Bethune Highway (SC 341) (**Exhibit ES-5**).

Alternative 4 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 4.8 miles long. It begins at the intersection of Sumter Highway (US 15) and Wilkinson Road, intersects Edgefield Drive, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and connects with Bethune Highway (SC 341) (**Exhibit ES-6**).

Alternative 5 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 4.8 miles long. It begins at the intersection of Sumter Highway (US 15) and Browntown Road, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and ends at a new intersection with Main Street (US 15) (**Exhibit ES-3**).

Alternative 6 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 5.2 miles long. It begins at the intersection of Sumter Highway (US 15) and Browntown Road, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and connects with Bethune Highway (SC 341) (**Exhibit ES-3**).

Alternative 7 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 5.4 miles long. It begins at the intersection of Sumter Highway (US 15) and Browntown Road, crosses St. Charles Road, crosses the SCRF, intersects Wisacky Highway (SC 341), crosses the SCRF a second time at an existing crossing, and connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15) (**Exhibit ES-4**).

Alternative 8 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 5.0 miles long. It begins at the intersection of Sumter Highway (US 15) and Browntown Road, crosses St. Charles Road, crosses the SCRF, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and connects with Bethune Highway (SC 341) (**Exhibit ES-4**).

Alternative 9 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 5.1 miles long. It begins just southwest of the intersection of Sumter Highway (US 15) and Wilkinson Road, intersects Edgefield Drive, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time at an existing crossing, and connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15) (**Exhibit ES-5**).

Alternative 10 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 4.4 miles long. It begins just southwest of the intersection of Sumter Highway (US 15) and Wilkinson Road, intersects Edgefield Drive, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and ends at a new intersection with Main Street (US 15) (**Exhibit ES-5**).

Alternative 11 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 5.1 miles long. It begins at the intersection of Sumter Highway (US 15) and Wilkinson Road, intersects Edgefield Drive, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time at an existing crossing, and connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15) (**Exhibit ES-6**).

Alternative 12 is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane and is approximately 4.4 miles long. It begins at the intersection of Sumter Highway (US 15) and Wilkinson Road, intersects Edgefield Drive, crosses the SCRF and St. Charles Road at the existing crossing, intersects Wisacky Highway (SC 341), crosses the SCRF a second time, and ends at a new intersection with Main Street (US 15) (**Exhibit ES-6**).

Exhibit ES-3. Alternatives 1, 5, and 6

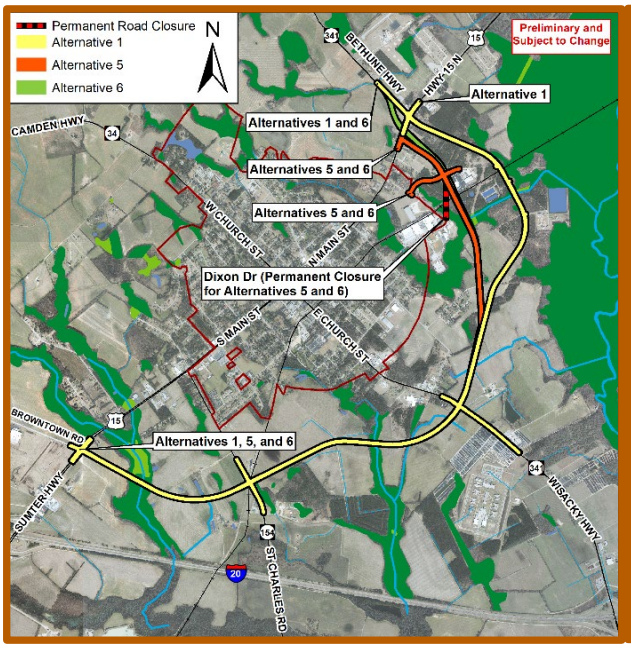


Exhibit ES-4. Alternatives 2, 7, and 8

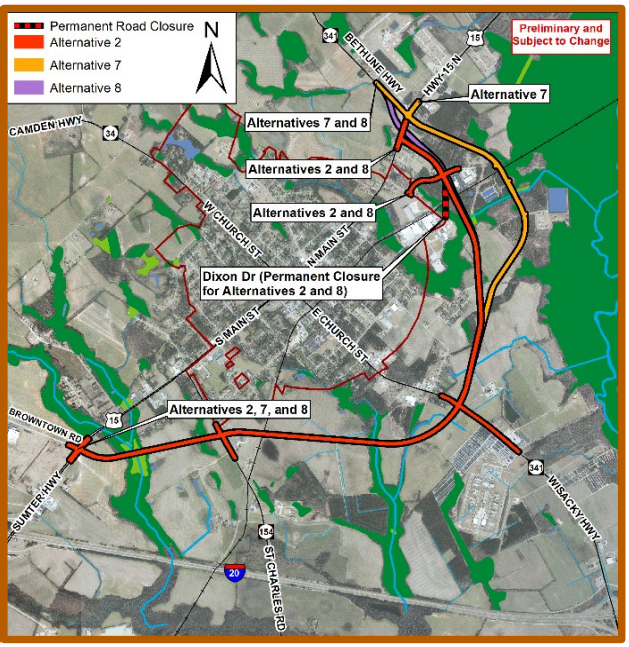


Exhibit ES-5. Alternatives 3, 9, and 10

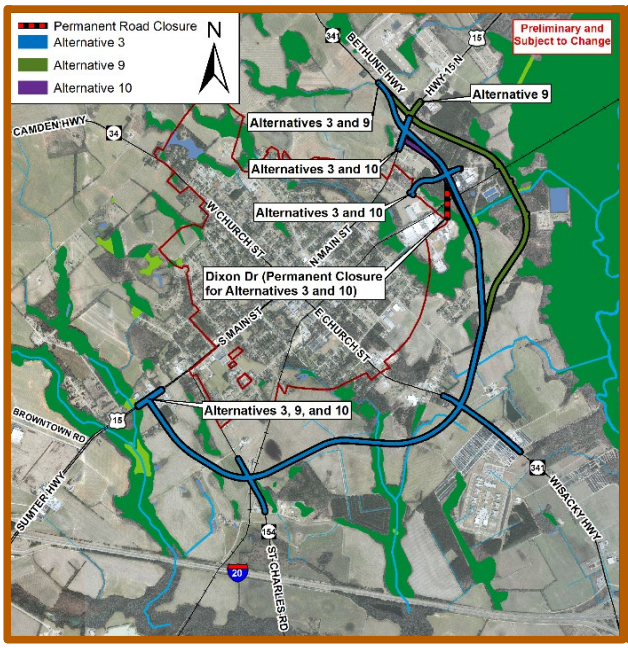
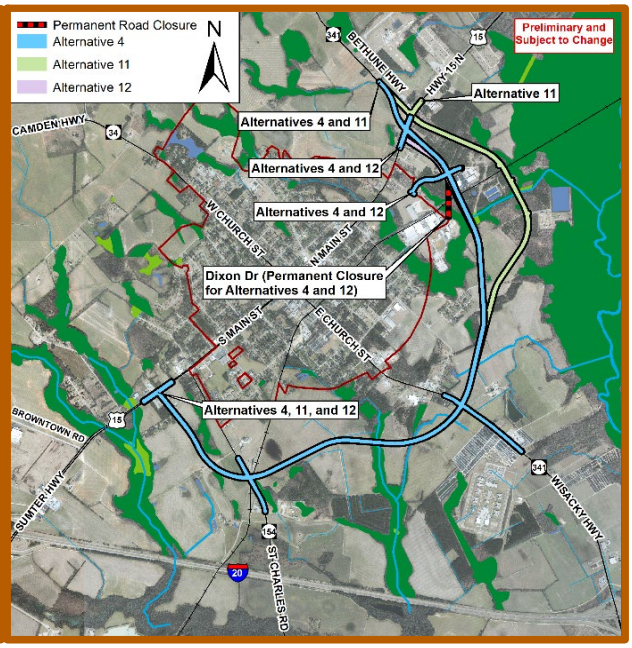


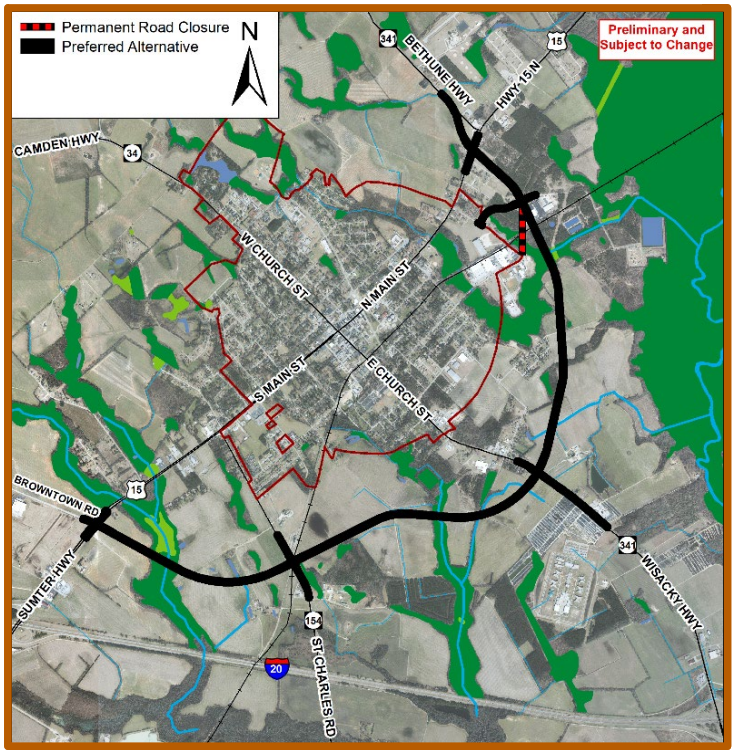
Exhibit ES-6. Alternatives 4, 11, and 12



What is the Recommended Preferred Alternative?

More detailed information about the 12 build alternatives can be found in **Chapter 3**. Based on the analyses presented in this DEIS, SCDOT is recommending Alternative 6 as the Preferred Alternative. However, an alternative will not be selected until after the conclusion of the DEIS comment period. The proposed Preferred Alternative (**Exhibit ES-7**) would be approximately 5.2 miles in length, require about 78.1 acres of right-of-way, and cost an estimated $22.6 million to construct.

Exhibit ES-7. Recommended Preferred Alternative



SCDOT is recommending Alternative 6 as the Preferred Alternative, subject to public and agency review because it:

- Best meets the primary project purpose of reducing truck traffic;
- Best meets the secondary purpose of supporting economic development;
- Would not require any residential or commercial relocations;
- Minimizes adverse impacts on low-income and minority populations;
- Would not require an additional new location railroad crossing;
- Would not affect cultural resources;
- Provides better connectivity to I-20 and SC 341; and
- Would not have significantly higher impacts on natural resources than the other build alternatives.

What are the anticipated effects of the project alternatives?

NEPA requires that the FHWA and SCDOT evaluate the potential impacts on the natural and human environments in detail. Therefore, a comprehensive alternative-development and screening process was used to identify alternatives that best satisfy the purpose and need for the project while minimizing impacts on the human and natural environment. Potential impacts on the natural and human environments were evaluated in detail for the build alternatives and a no-build alternative. In accordance with 40 CFR 1502.14(b) and (d), 12 reasonable alternatives were developed while taking into consideration a comparable level of detail for evaluation in this DEIS.

A comprehensive alternative-screening of all 12 build alternatives was then conducted. In addition to traffic screening factors including projected truck traffic downtown in 2045, Build Alternatives 1-12 and the No-Build Alternative were analyzed using environmental, social, and cost-related screening factors. **Chapter 4** analyzes the following in detail:

- Existing conditions of the project study area;
- Potential impacts on the human and natural environments; and
- Mitigation measures that would be implemented to address impacts

As seen in **Table ES-2** at the end of this summary, the proposed project is expected to result in direct and/or indirect adverse and/or beneficial effects on socioeconomics, communities, water quality, wetlands and streams, floodplains, farmlands, and hazardous material sites. For further information about the potential impacts on the human and natural environments, please refer to **Chapter 4** as well as supporting technical memoranda, which can be found in the appendices.

Due to the nature of the project study corridor and surrounding environment in the project study area, complete avoidance of all impacts is not possible. Mitigation measures are proposed that would minimize or mitigate the potential impacts from the Preferred Alternative. Descriptions of these measures can be found in the discussion of respective resources in **Chapter 4**.

How were the public and agencies involved?

FHWA is the lead federal agency and SCDOT is the project sponsor and lead state agency for the Bishopville Truck Route Project. Section 6002 of the *Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU)*, as amended by Section 1304 of the *Fixing America's Surface Transportation (FAST) Act*, requires lead agencies to identify and involve cooperating and participating agencies, develop coordination plans, provide opportunities for the public and agencies to be involved in refining the purpose and need statement and determining the range of alternatives, and collaborate with cooperating and participating agencies to determine methodologies and the level of detail for analyzing alternatives. Lead agencies must also provide oversight with regard to managing the *NEPA* process and resolving issues.

Public and agency participation has been an important part of the Bishopville Truck Route Project, and the project team has been committed to actively encouraging and soliciting public and agency participation and feedback. The public and agency involvement process was comprehensive, using the project website, meetings, and other materials to ensure that all stakeholders were aware of the project and understood the methods for providing input. Please refer to **Chapter 5** for a summary of the activities implemented during scoping, development of the purpose and need (**Chapter 2**), alternative-development (**Chapter 3**), and development of the DEIS.

Are there other actions required for the project?

The following actions will be needed for the proposed project:

- Section 402 (*Clean Water Act of 1972* [*CWA*], as amended) National Pollutant Discharge Elimination System permit;
- *CWA* Sections 401 and 404 wetland and stream impact permit; and
- Compliance with the South Carolina Stormwater Management and Sediment Reduction Act (1991)

What are the next steps?

The SCDOT would like your input about the project and the contents of the DEIS. Copies of the DEIS are available for review at the locations and website listed in **Table ES-1**. Comments on the DEIS will be accepted until May 9, 2022. You can submit your comments on the project and/or the DEIS via mail, email, or the website: https://www.scdot.org/inside/BishopvilleTruckRoute/.

Please send written comments to:

Bishopville Truck Route Project
c/o South Carolina Department of Transportation
Jacob Meetze, P.E.
PO Box 191
Columbia, SC 29202-0191

Table ES-1. Draft Environmental Impact Statement Review Locations

Review Location	Address	Phone Number
Bishopville City Hall	135 E. Church Street Bishopville, SC 29010	(803) 484-5948
Lee County Courthouse	123 S. Main Street Bishopville, SC 29010	(803) 484-5341
Lee County Department of Transportation	703 E. Church Street Bishopville, SC 29010	(803) 484-6236
Lee County Public Library	200 N. Main Street Bishopville, SC 29010	(803) 484-5921
SCDOT Headquarters	955 Park Street Columbia, SC 29201	(803) 737-1200
SCDOT Project Website	https://www.scdot.org/inside/BishopvilleTruckRoute/	
SLRCOG Main Office	2525 Corporate Way Suite 200 Sumter, SC 29154	(803) 775-7381

During the 45-day DEIS review period, SCDOT will hold a public hearing to allow the public an opportunity to discuss the project with the project team and provide comments on the DEIS. SCDOT and FHWA will consider the analysis presented in this DEIS and all comments and input received to identify a Selected Alternative. The Selected Alternative could be the Preferred Alternative, the No-Build Alternative, or another build alternative. The decision, and responses to comments received, will be published in a combined Final Environmental Impact Statement (FEIS)/Record of Decision (ROD). Upon FHWA approval of the combined FEIS/ROD, SCDOT will be authorized to begin final design, acquire the necessary permits, acquire right-of-way, and begin construction.

Table ES-2. Summary of Potential Impacts by Alternative

Potential Impacts	No-Build	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6 (PREFERRED)	Alternative 7	Alternative 8	Alternative 9	Alternative 10	Alternative 11	Alternative 12
Natural Resource-Related Screening Factors													
Streams (linear feet)	0	729	636	535	535	730	**732**	635	638	532	533	532	533
Wetlands (acres)	0.0	3.1	4.2	1.9	1.9	4.0	**4.0**	3.3	4.2	1.1	1.9	1.1	1.9
Ponds (acres)	0.0	0.0	0.1	0.3	0.3	0.1	**0.3**	0.0	0.3	0.0	0.1	0.0	0.1
Impaired Waters Crossed (#)	0	1	1	1	1	1	**1**	1	1	1	1	1	1
Floodplains (acres)	0.0	1.8	1.6	0.8	0.7	2.0	**2.0**	1.4	1.6	0.6	0.7	0.5	0.7
Threatened/Endangered Species (#)	0	0	0	0	0	0	**0**	0	0	0	0	0	0
Community-Related Screening Factors													
Residential Relocations (#)	0	1	0	3	3	0	**0**	1	0	4	3	4	3
Commercial Relocations (#)	0	3	0	0	1	0	**0**	3	0	3	0	4	1
Community Resources (#)	0	0	0	0	0	0	**0**	0	0	0	0	0	0
Section 4(f)/Section 6(f) Resources (#)	0	0	0	0	0	0	**0**	0	0	0	0	0	0
Cemeteries (#)	0	1	0	0	0	0	**0**	1	0	1	0	1	0
Cultural Resources (#)	0	0	0	1	1	0	**0**	0	0	1	1	1	1
Noise-Impacted Receivers (#)	2	0	0	0	0	0	**0**	0	0	0	0	0	0
Environmental Justice Populations Affected (Y/N)	Y	Y	Y	Y	Y	Y	**Y**	Y	Y	Y	Y	Y	Y
Land Use-Related Screening Factors													
Designated Agriculture Parcels Affected (#)	0	20	13	17	17	17	**20**	16	16	17	14	17	14
Designated Agricultural (acres)	0.0	46.7	31.7	34.9	34.8	41.8	**43.7**	36.6	35.5	37.9	33.0	37.9	33.0
Farmland of Statewide Importance (acres)	0.0	7.3	8.3	8.0	5.8	7.6	**8.0**	7.9	8.7	7.2	7.6	5.1	5.4
Prime Farmland (acres)	0.0	61.1	56.2	59.8	62.1	59.4	**63.0**	57.9	59.7	58.0	56.3	60.3	58.6
Hazardous Sites (#)	0	4	4	5	5	4	**5**	4	5	4	4	4	4
Additional New Location Railroad Crossings (#)	0	0	1	0	0	0	**0**	0	1	0	0	0	0
Utilities Crossed (#)	0	41	46	44	47	46	**45**	41	45	48	45	51	48
Traffic-Related Screening Factors													
Estimated Average Daily Trucks on Main Street in 2045 (#)	3,200	2,200	2,100	2,200	2,200	2,200	**1,900**	2,200	1,900	2,400	2,400	2,400	2,400
Estimated Average Peak Period (AM and PM) Travel Time in 2045 (minutes)	11:18	6:58	6:56	6:52	6:52	7:00	**6:33**	6:56	6:33	7:09	7:09	7:09	7:09
US 15/I-20 <-> US 15/Bethune Highway (minutes)	11:22	7:00	7:00	7:00	7:00	7:07	**6:45**	7:00	6:45	7:00	7:07	7:00	7:07
US 15/Bethune Highway <-> SC 341 north of I-20 (minutes)	11:15	8:15	8:22	8:00	8:00	8:22	**8:00**	8:15	8:00	8:15	8:22	8:15	8:22
US 15/Bethune Highway <-> US 15 north of I-20 via Alternative (minutes)	-	7:07	6:37	7:30	7:30	6:45	**6:30**	7:00	6:30	7:52	7:22	7:52	7:22
US 15/Bethune Highway <-> SC 341 north of I-20 via Alternative (minutes)	-	5:30	5:45	5:00	5:00	5:45	**5:00**	5:30	5:00	5:30	5:45	5:30	5:45
Intersections with Poor Level of Service in 2045 (#)	2	0	0	0	0	0	**0**	0	0	0	0	0	0
Proposed US 15 Intersection Modifications (#)	2	2	3	3	3	3	**2**	2	2	3	4	3	4
Cost-Related Screening Factors													
Approximate Length (miles)	0.0	5.5	4.6	4.8	4.8	4.8	**5.2**	5.4	5.0	5.1	4.4	5.1	4.4
Approximate Right-of-Way (acres)	0.0	78.9	71.1	73.3	73.4	74.0	**78.1**	76.0	75.2	74.1	69.2	74.2	69.3
Estimated Total Cost ($)	$0	$22,430,000	$23,150,000	$19,007,000	$18,937,000	$23,610,000	**$22,577,000**	$21,720,000	$21,617,000	$19,360,000	$17,540,000	$19,040,000	$19,720,000
Estimated Right-of-Way Cost ($)	$0	$1,680,000	$1,400,000	$1,757,000	$1,687,000	$1,610,000	**$1,827,000**	$1,470,000	$1,617,000	$1,610,000	$1,540,000	$1,540,000	$1,470,000
Estimated Construction Cost ($)	$0	$20,750,000	$21,750,000	$17,250,000	$17,250,000	$22,000,000	**$20,750,000**	$20,250,000	$20,000,000	$17,750,000	$16,000,000	$17,500,000	$18,250,000

Note: Potential impact estimates for all build alternatives were calculated based on the proposed footprint plus a 25-foot buffer and are subject to change.

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF EXHIBITS

LIST OF TABLES

LIST OF FIGURES (FOLLOW RESPECTIVE SECTIONS)

ACRONYMS AND ABBREVIATIONS

AADT: Average Annual Daily Traffic
AASHTO: American Association of State Highway Transportation Officials
ACE: Agency Coordination Effort
ACS: American Community Survey
ADTT: Average Daily Truck Traffic
APE: Area of Potential Effects
APHIS: Animal and Plant Health Inspection Service
APPR: *Advanced Project Planning Report*
AST: Aboveground Storage Tank
ASTM: American Society for Testing and Materials
BFE: Base Flood Elevations
BG: Block Group
BMPs: Best Management Practices
CAA: Clean Air Act of 1963
CDBG: Community Development Block Grant
CEDS: Comprehensive Economic Development Strategy
CEI: Construction Engineering and Inspection
CEQ: Council on Environmental Quality
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR: Code of Federal Regulations
CH_4: Methane
CIA: Community Impact Assessment
CLOMR: Conditional Letter of Map Revision
CNE: Common Noise Environment
CO: Carbon Monoxide
CO_2: Carbon Dioxide
CT: Census Tract
CTC: County Transportation Committee
CWA: Clean Water Act of 1972
dB: Decibel
dBA: A-weighted sound levels in decibels
DEIS: Draft Environmental Impact Statement
DFRTF: Dry-Cleaning Facility Restoration Trust Fund
DHD: Development Holding District
DHV: Design Hourly Volumes
DOJ: Department of Justice
EA: Environmental Assessment
EDA: Economic Development Administration
EDD: Economic Development District

EIS: Environmental Impact Statement
EJ: Environmental Justice
EJSCREEN: Environmental Justice Screening and Mapping Tool
EMS: Emergency Medical Service
EO: Executive Order
EPA: United States Environmental Protection Agency
ERS: Environmental Record Search
ESA: Endangered Species Act
ESO: Environmental Services Office
FAA: Federal Aviation Administration
FAHA: Federal-Aid Highway Act
FAST: Fixing America's Surface Transportation Act
FEIS: Final Environmental Impact Statement
FEMA: Federal Emergency Management Agency
FHWA: Federal Highway Administration
FIRM: Flood Insurance Rate Map
FPPA: Farmland Protection Policy Act
FR: Federal Register
FTC: Farmers' Telephone Cooperative
GIS: Geographic Information System
GP: General Permit
GRM: General Residential/Manufactured Housing
HEI: Health Effects Institute
HSS: Health and Human Services
HUC: Hydrologic Unit Code
ICE: Indirect and Cumulative Effects
IP: Individual Permit
IPaC: Information for Planning and Conservation Database
IRIS: Integrated Risk Information System
LEDPA: Least Environmentally Damaging Practicable Alternative
LEP: Limited English Proficiency
L_{eq}: Equivalent Steady-State Sound Level
L_{eq} (h): Hourly value of L_{eq}
LOI: Letter of Intent
LOMR: Letter of Map Revision
LOS: Level of Service
LRTP: Long-Range Transportation Plan
LUST: Leaking Underground Storage Tank
LWCF: Land and Water Conservation Fund
MBTA: Migratory Bird Treaty Act of 1918
MGD: Million Gallons Per Day

MOVES: Motor Vehicle Emissions Simulator
MPO: Metropolitan Planning Organization
MS4: Municipal Separate Storm Sewer System
MSAT: Mobile Source Air Toxics
N_2O: Nitrous Oxide
NAAQS: National Ambient Air Quality Standards
NAC: Noise Abatement Criteria
NATA: National Air Toxics Assessment
NCHRP: National Cooperative Highway Research Program
NEPA: National Environmental Policy Act of 1969
NFA: No Further Action
NFIP: National Flood Insurance Program
NGO: Non-Governmental Organization
NHPA: National Historic Preservation Act of 1966
NO_2: Nitrogen Dioxide
NOI: Notice of Intent
NOA: Notice of Availability
NP: Nationwide Permit
NPDES: National Pollutant Discharge Elimination System
NRCS: Natural Resources Conservation Service
NRHP: National Register of Historic Places
NRI: Nationwide Rivers Inventory
NWI: National Wetlands Inventory
O_3: Ozone
O-D: Origin-Destination
PA: Preferred Alternative
Pb: Lead
PIM: Public Information Meeting
PM: Particulate Matter
QA/QC: Quality Assurance/Quality Control
QCEW: Quarterly Census of Employment and Wages
RCE: Resident Construction Engineer
RCRA: Resource Conservation and Recovery Act of 1976
RD: Redevelopment District
ROD: Record of Decision
ROW: Right-of-Way
SAFETEA-LU: Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users
SCDAH: South Carolina Department of Archives and History
SCDEW: South Carolina Department of Employment and Workforce
SCDHEC: South Carolina Department of Health and Environmental Control
SCDNR: South Carolina Department of Natural Resources

SCDOT: South Carolina Department of Transportation
SCIAA: South Carolina Institute of Archaeology and Anthropology
SCRF: South Carolina Central Railroad
SCSWMv4: South Carolina Statewide Model Version 4
SHPO: State Historic Preservation Office
SIP: State Implementation Plan
SLRCOG: Santee-Lynches Regional Council of Governments
SO_2: Sulfur Dioxide
SOP: Standard Operating Procedure
SPCC: Spill Prevention, Control, and Countermeasures
SSURGO: Soil Survey Geographic Database
STIP: Statewide Transportation Improvement Program
SVE: Soil Vapor Extraction
SWPPP: Stormwater Pollution Prevention Plan
TAZ: Traffic Analysis Zone
TCM: Transportation Control Measures
TMDL: Total Maximum Daily Load
TNM: Traffic Noise Model
TSM: Transportation Systems Management
US: United States
USC: United States Code
USACE: United States Army Corps of Engineers
USDA: United States Department of Agriculture
USDOI: United States Department of the Interior
USFWS: United States Fish and Wildlife Service
USGS: United States Geological Survey
UST: Underground Storage Tank
VIA: Visual Impact Assessment
VMT: Vehicle Miles Traveled
WOTUS: Waters of the US
WQC: Water Quality Certification
WQMS: Water Quality Monitoring Station

1 PROJECT INTRODUCTION

1.1 What is the Bishopville Truck Route Project?

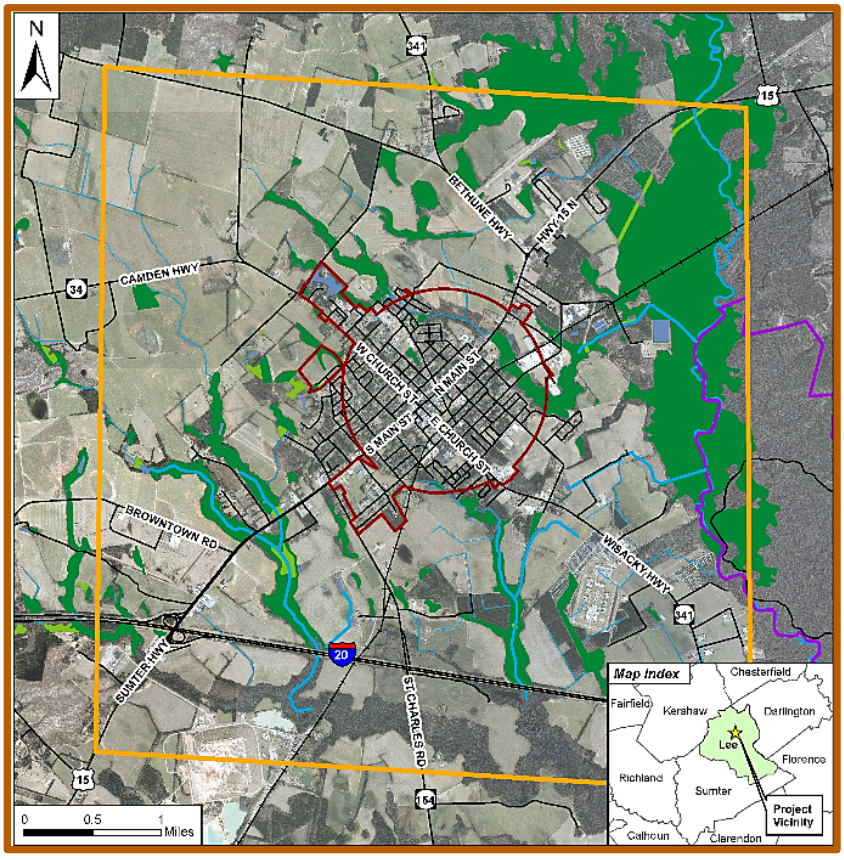
The South Carolina Department of Transportation (SCDOT), in cooperation with the Federal Highway Administration (FHWA), is undertaking project-development and preliminary engineering activities to prepare a Draft Environmental Impact Statement (DEIS) in compliance with the *National Environmental Policy Act (NEPA) of 1969,* as amended, for the Bishopville Truck Route Project (project). The proposed project is located in Bishopville in Lee County, South Carolina.

Over 1,900 large commercial trucks travel Main Street (US 15) through downtown Bishopville daily (**Appendix A**: *Bishopville Truck Route Project Traffic Analysis Study* [2021]). The proposed project would provide trucks with an alternate route and is considered necessary to reduce existing and future truck traffic in downtown Bishopville. The primary purpose of the Bishopville Truck Route Project is to address existing and future truck traffic traveling through downtown Bishopville. The secondary purpose is to enhance the economic development of the area. The purposes are based on a need to address existing and projected truck traffic traveling through downtown Bishopville, and a need to augment regional economic development initiatives in Lee County, which has experienced a decline over the past decade.

A project study area is defined as the geographic area that includes communities and resources that could be potentially affected by the proposed project. The study area typically includes the area immediately surrounding the proposed project but may extend beyond the project limits.

The Bishopville Truck Route Project study area (**Exhibit 1-1** and **Figure 1-1**) is generally defined by the area bordered by the US 15/I-20 interchange in the southwest, the intersection of Pinchum Sly Road and Camden Highway (SC 34) in the northwest, US 15 north of Bethune Highway (SC 341) in the northeast, and the intersection of Wisacky Highway (SC 341) and Mac Stuckey Lane in the southeast.

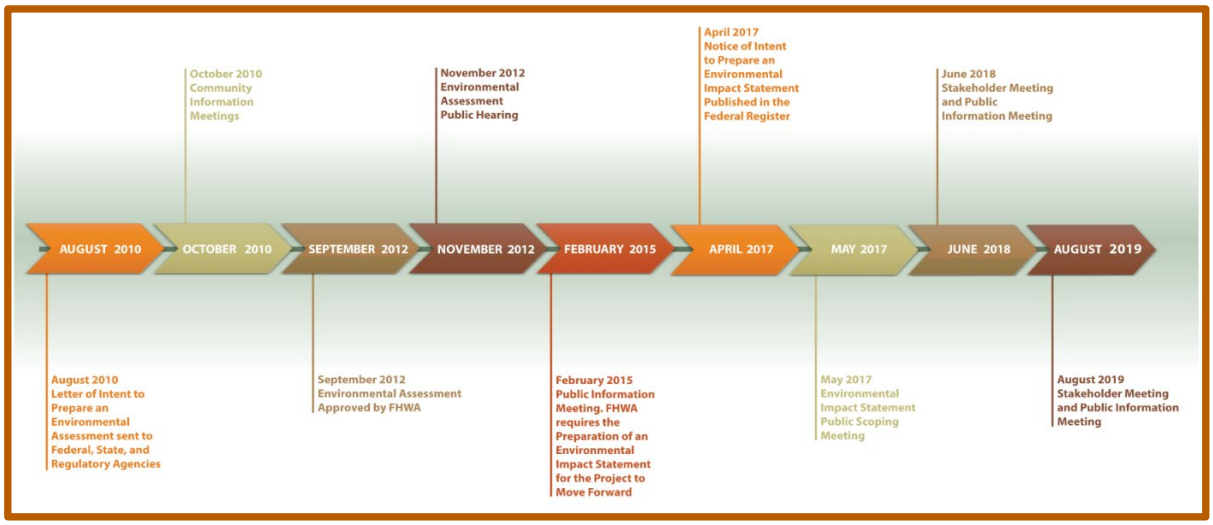
Exhibit 1-1. Project Study Area



1.2 What is the history of the project?

There is a long history associated with the Bishopville Truck Route Project. A timeline illustrating the history of the project is shown in **Exhibit 1-2**.

Exhibit 1-2. Project History



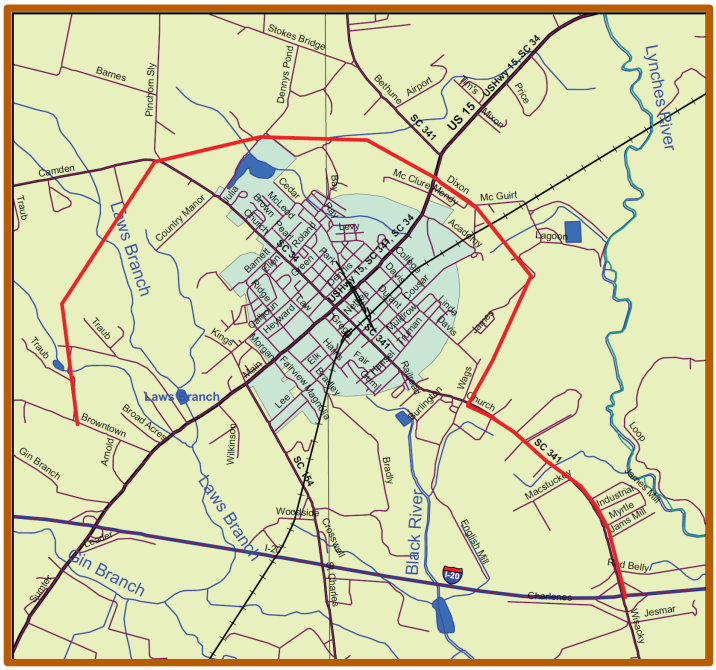
The Santee-Lynches Regional Council of Governments (SLRCOG) identified a need to divert truck traffic from Main Street (US 15) in downtown Bishopville through their Long-Range Transportation Planning (LRTP) process. Between 2004 and 2006, Lee County and the City of Bishopville secured approximately $5.6 million in Congressional earmarks for the proposed project through various appropriations and transportation acts.

In 2009, the SCDOT and SLRCOG prepared the *Advanced Project Planning Report (APPR)* for a possible truck route from I-20 to Browntown Road (**Appendix B**). The SLRCOG developed an alignment for the *APPR* (**Exhibit 1-3**), but it was not formally evaluated or endorsed by SCDOT.

The proposed alignment was approximately 6.2 miles long and consisted of two 12-foot travel lanes, a 15-foot paved median, and four-foot shoulders to accommodate bicycle travel.

The proposed route began at I-20 in the southeast heading northwest along Wisacky Highway (SC 341) before shifting northeast on a new alignment just before the intersection with Wags Drive. From there, it connected with Dixon Drive and headed northwest, where it intersected Main Street (US 15). It then headed west around the Bishopville City limits to the intersection of Camden Highway (SC 34) and Pinchum Sly Road before heading south and ending at Browntown Road.

Exhibit 1-3. *APPR* Proposed Alignment



The *APPR* documented a preliminary evaluation of the study area that assessed the potential benefits, impacts, and areas of concern to the human and natural environment of the project. The goal of the proposed project was to relieve and discourage truck traffic, reduce associated truck noise, and encourage pedestrian movements in the central business district. The *APPR* also stated that the project would support the recruitment of new business ventures in areas of the city that had recently undergone streetscape improvements and other revitalization efforts.

In 2010, SCDOT began preparing an Environmental Assessment (EA) in compliance with *NEPA*. The EA, which was approved in September 2012, analyzed seven alternate routes for heavy trucks traveling on Main Street (US 15) through downtown Bishopville and a no-build alternative and identified a preferred alternative. At the November 2012 public hearing, a majority of attendees were not in favor of the project. Subsequently, the City of Bishopville and Lee County passed resolutions against the Preferred Alternative. Recent correspondence from the City of Bishopville and Lee County expressing support for the project can be found in **Appendix C** and **Appendix D**.

Because of the resolutions opposing the Preferred Alternative and public controversy associated with the project, FHWA informed SCDOT that an EIS would have to be prepared if the SLRCOG wanted the project to move forward. A public information meeting was held in February 2015 to update the public on the project status and to present options for moving the project forward. In a March 27, 2017 letter to SCDOT, the SLRCOG Board of Directors communicated their desire to proceed with the project and the preparation of an EIS, and a Notice of Intent (NOI) to prepare an EIS was published in the Federal Register on April 14, 2017 (see **Appendix D**).

1.3 How would the project be funded?

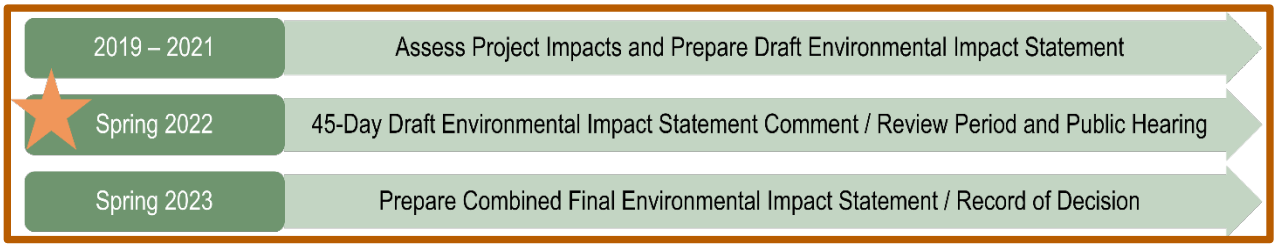
Based on the preliminary design, the project is estimated to cost approximately $22.6 million. The SLRCOG has programmed federal funds through the "guideshare" rural transportation planning program for the project totaling approximately $25.4 million and is included in the SLRCOG *2021-2027 Transportation Improvement Program* (TIP). The Lee County Transportation Committee (CTC) has also allocated $929,910 in local funds that will be used as matching funds for the earmarks.

In addition, the project is included in the SCDOT *2017-2022 Statewide Transportation Improvement Program* (STIP). The federally funded projects listed in the STIP evolve from SCDOT planning processes, the *Statewide Multimodal Transportation Plan*, and Metropolitan Planning Organization (MPO) and Council of Government (COG) long-range plans.

The STIP identifies all federally-funded transportation programs and projects, as well as projects of regional significance regardless of funding source. The STIP is a project scheduling and funding program document, and only includes projects for which there is committed funding available.

1.4 What is the schedule for the project?

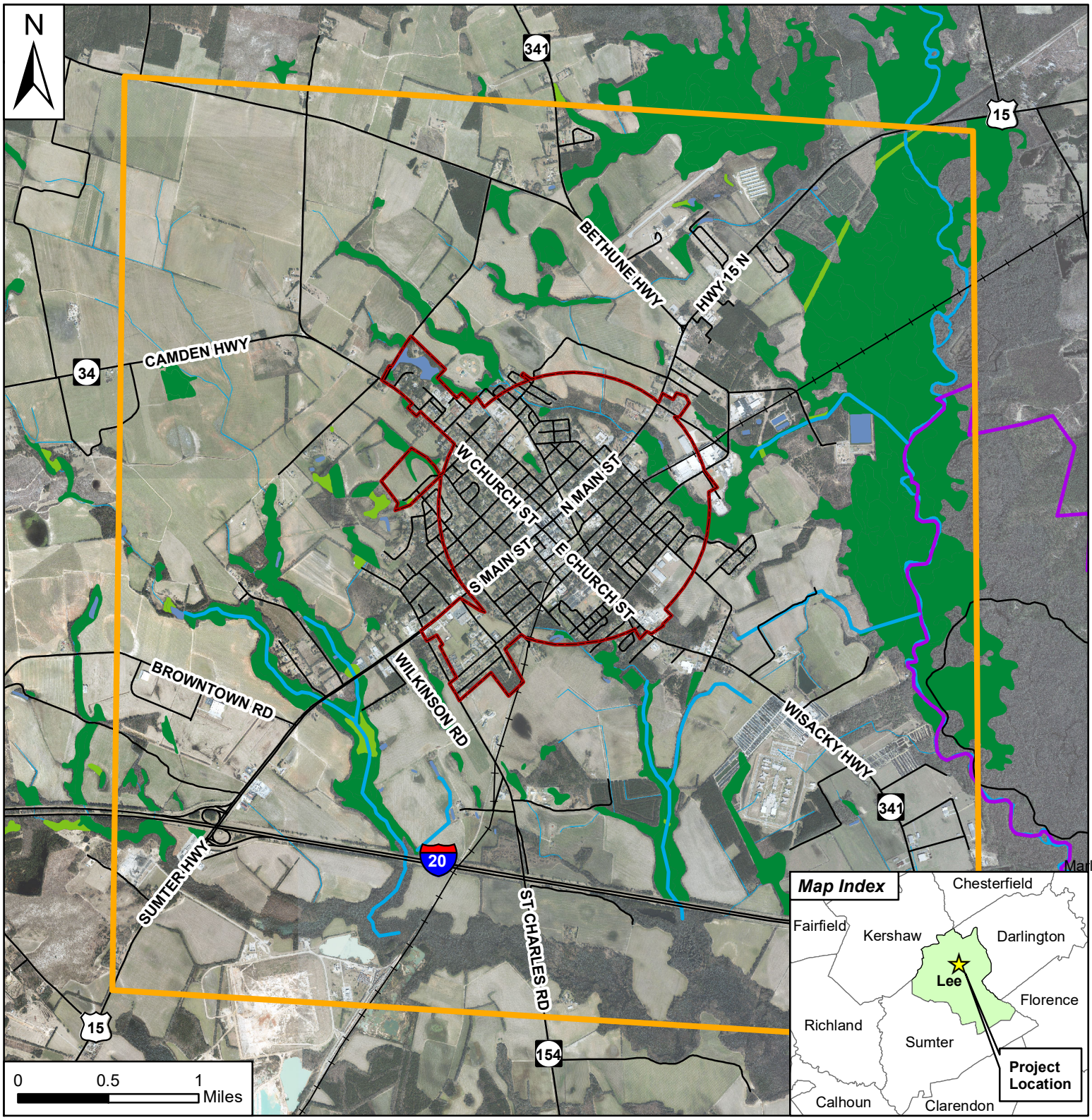
Exhibit 1-4. Project Schedule



SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Rivers and Streams
Road
SCRF Railroad
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lee State Park
Municipal Boundary
Study Area

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Project Location

Figure 1-1

2 PURPOSE AND NEED

2.1 What is a Purpose and Need Statement?

Purpose and Need

The purpose and need is a key factor in determining the alternatives considered. The purpose and need limits the range of alternatives because an agency can dismiss, without detailed study, alternatives that fail to meet the purpose and need. A well-defined, succinct purpose and need is a fundamental component of an EIS.

An important part of an Environmental Impact Statement (EIS) is the purpose and need statement. The purpose and need of a project are essential to establishing a basis for the development of the range of reasonable alternatives required in an EIS and assists with the identification and eventual selection of a preferred alternative. The primary purpose of a project is the most problematic need to be addressed, while secondary purposes are based on needs that may or may not be addressed. A project need describes a key transportation problem that must be addressed.

Per the *National Environmental Policy Act* (*NEPA*), the project's purpose and need statement: includes an understanding of the area's transportation problems, guides development and evaluation of reasonable alternatives to meet the project purpose, ensures project decisions are legally defensible, and justifies project impacts and costs. The Bishopville Truck Route Project purpose and need statement is summarized below.

2.2 Why is the project needed?

The needs for the project are described below and supported by existing and projected project study area conditions discussed in this chapter. Supporting information includes a description of the roadway network and how it operates now and in the future, data on population and employment trends, a discussion of the project setting, and a review of area transportation and land use plans.

2.2.1 Primary Need: Reduce Truck Traffic Through Downtown

Main Street (US 15) serves as the primary corridor through downtown Bishopville, which results in substantial heavy truck traffic traveling through downtown. According to the *Bishopville Truck Route Project Traffic Analysis Study* (2021), which is located in **Appendix A**, the existing (2015) estimated average daily truck traffic (ADTT) on Main Street (US 15) through downtown is 1,900 trucks per day, and the ADTT is projected to increase by about 68% to 3,200 trucks per day by 2045. The combination of regional truck movement and daily local commuter traffic hinders traffic flow and generates noise and other negative impacts in the central business district.

In 2008, the City of Bishopville reconfigured Main Street (US 15) from four lanes to two lanes with a raised median and on-street parking as part of the Bishopville Streetscape Project. One reason for reducing the number of lanes was to discourage trucks from traveling through downtown. However, after the project was complete, residents and business owners continued to express concern about the amount of truck traffic downtown and its effect on crossing Main Street (US 15), sight distance, and on-street parking.

2.2.2 Secondary Need: Enhance Economic Development

Lee County is in the four-county Santee-Lynches Economic Development District (EDD) and continues to experience declines in population and employment. According to the *Bishopville Truck Route Project Economic Development Report* (**Appendix I**), Lee County's share of regional employment decreased from 6.6% in 1970 to 4.7% in 2016 and is forecasted to continue decreasing. The report details regional economic development initiatives for the Bishopville area, including water and sewer upgrades, downtown revitalization efforts, workforce education, industry recruitment, and a proposed development district near I-20 south of downtown (**Section 4.1**). According to the report, the failure to address the disruptive effects of large trucks traveling through downtown could inhibit the effectiveness of development initiatives.

Project Need

A project need describes the problem that needs to be addressed and possible explanations for the causes of the problems. The need includes data and other information that supports why an agency is proposing a project.

2.3 What is the purpose of the project?

Project Purpose

A project purpose states why a project is proposed and explains what the outcome is. A project can have multiple purposes. The primary purpose is based on the most problematic need, while a secondary purpose is based on a need that may or may not be addressed.

According to the *Bishopville Truck Route Project Traffic Analysis Study* (2021), which is located in **Appendix A**, over 1,900 large commercial trucks travel Main Street (US 15) through downtown Bishopville daily. The primary purpose of the proposed Bishopville Truck Route Project is to address the existing and future truck traffic traveling through downtown Bishopville. The secondary purpose is to enhance economic development in the area. The project purposes are based on the following needs that have been identified in the project study area:

- The need to address the substantial existing and projected truck movement through downtown Bishopville to improve mobility for vehicle and truck traffic in the area.
- The need to augment regional economic development initiatives in Lee County, which has experienced a decline in population and employment for more than a decade.

2.4 What are the existing conditions of the study area?

2.4.1 What roadways are in the regional network?

As seen in **Figure 1-1**, the roadway network in the study area includes one interstate (I-20), one US route (US 15), three state highways (SC 34, SC 154, and SC 341), and several local roads. The City of Bishopville and Lee County are centrally located to accommodate freight movement throughout South Carolina and beyond the state's borders.

I-20 is a four-lane controlled-access east-west freeway south of Bishopville. I-20 travels through the state of South Carolina, from Florence to the east, to North Augusta to the west, and crosses into Georgia. The interstate serves as one of the main routes for freight and vehicle traffic traveling to/from Florence (east) and Columbia (west). Most of the truck tonnage in Lee County is through-traffic, mostly on I-20. According to the *Forward 2045: Santee-Lynches Regional Long-Range Transportation Plan* (2019), I-20 carries just under 15 million tons of goods and services annually through Kershaw and Lee Counties and is expected to carry up to 25 million tons annually by 2040.

I-20, along with I-95, provides access to two major US seaports: the Port of Charleston (South Carolina) and the Port of Savannah (Georgia), and an inland port: the Port of Dillon (South Carolina). Railroad access is maintained by the South Carolina Central Railroad (SCRF), which provides a short line to Darlington and a short line to Shaw Air Force Base.

Main Street (US 15) is a southwest to northeast arterial that serves as the primary corridor through the downtown area, connecting I-20 to Bishopville, Hartsville, Bennettsville, and other towns in the northeastern region of South Carolina. Beginning at I-20, US 15 is a four-lane median-divided roadway, narrowing to a three-lane section with a center turn lane following the St. Charles Road (SC 154) intersection. This is the cross-section for most of the corridor before an additional southbound lane is added from just south of Dixon Drive to Bethune Highway (SC 341). US 15 provides important access to the west and south for traffic to/from Darlington County. In addition, a notable share of SC 341 truck traffic north of Bishopville funnels onto US 15. US 15 serves as a key freight route through the region, carrying approximately one to two million tons of goods annually.

SC 341 connects downtown Bishopville to I-20 in the southeast and the towns of Lynchburg and Bethune to the southeast of Bishopville and the towns of Olanta and Kershaw to the northwest. SC 341 enters the study area in the north as Bethune Highway (SC 341), intersecting Main Street (US 15) north of downtown Bishopville. SC 341 shares the Main Street (US 15) alignment until the intersection of Main Street (US 15) and Church Street (SC 34/SC 341). SC 341 continues southeast as Wisacky Highway, beginning at around English Mill Road, crossing over I-20 then continuing outside the study area. Classified as a minor arterial, SC 341 serves both freight and vehicle traffic, carrying less than one million tons of goods annually. The highest volume of goods travels on Bethune Highway (SC 341) leading to Kershaw, and the amount of goods carried on Bethune Highway (SC 341) is projected to increase by up to one million tons per year over the next 20 years.

SC 34 traverses the study area to the west as Camden Highway. SC 34 continues east towards downtown Bishopville, where it is known as W. Church Street inside the city limits. From the intersection of Main Street (US 15) and Church Street (SC 34/SC 341), SC 34 follows Main Street (US 15) north through downtown Bishopville and exits the study area. SC 34 is classified as a major collector roadway and provides a link to the Camden to the west and Darlington to the northeast.

St. Charles Road (SC 154) is a major collector roadway and runs southeast-northwest through the study area. St. Charles Road (SC 154) begins to the southeast in the Town of Mayesville, continues northwest through the study area, and ends at the Sumter Highway (US 15) in Bishopville.

Browntown Road, which extends from the west, terminates at Sumter Highway (US 15) north of I-20.

There are four existing signalized intersections in the study area:

- Main Street (US 15) at St. Charles Road (SC 154)/McIntosh Street;
- Main Street (US 15) at Church Street (SC 34/SC 341);
- Main Street (US 15) at Cedar Lane; and
- E. Church Street (SC 341) at Nettles Street.

2.4.2 What are the existing traffic conditions?

The *Bishopville Truck Route Project Traffic Analysis Study* (2021) documents existing (2015) and projected (2045) traffic conditions. Three sources of average annual daily traffic (AADT) and average daily traffic (ADT) information were evaluated to accurately depict average existing and projected future traffic in Bishopville: 2015 SCDOT AADT volume estimations, daily project counts, and 2015 volume estimations from the travel demand model. The SCDOT volumes were initially cross-referenced with the collected volumes and were found to be similar at all locations except Bethune Highway (SC 341). The 2015 travel demand model AADT did not consistently align with either the SCDOT or collected volumes, especially on US 15 south of SC 341. The estimated AADTs were corrected to more accurately reflect 2015 volumes using all three data sources.

The revised 2015 AADT estimates are illustrated in **Exhibit 2-1**. In 2015, US 15 south of Bishopville had an AADT of 11,500 (1,400 trucks), and US 15 north of Bishopville had an AADT of 6,800 (1,300 trucks).

Exhibit 2-1. Estimated 2015 Average Annual Daily Traffic

2.4.3 What are the projected traffic conditions?

Analysis of historical traffic growth and travel demand model projections were both taken into consideration in determining an appropriate growth rate for the study area. Historical traffic growth was shown to be minimal; however, a conservative estimate of traffic growth was used to ensure that the physical elements of the proposed project would be adequate.

The future year (2045) traffic forecasts estimate an AADT of 20,100 vehicles on US 15 south of Bishopville (2,400 trucks) and an AADT of 11,900 vehicles (2,250 trucks) US 15 north of Bishopville (**Exhibit 2-2**). The future AADT estimate (3,200 trucks) only accounts for downtown through-traffic on Main Street (US 15) and does not factor in trucks turning onto E. Church Street (SC 341). Truck traffic is expected to account for 19% of future traffic (versus 13% in 2015). Traffic forecasts also indicate the AADT on US 15 between I-20 and downtown Bishopville would exceed the typical maximum AADT, which may result in delays.

Projected 2045 traffic conditions without any roadway, traffic control, or improvements revealed that movements at four intersections would operate at an unacceptable level of service: Browntown Road and Bethune Highway (SC 341) with US 15 and US 15 with St. Charles Road (SC 154) and Church Street (SC 34/SC 341). The difference in existing versus potential future travel times is more pronounced in the PM than in the AM.

Exhibit 2-2. Forecasted 2045 Average Annual Daily Traffic

2.4.4 What is the project setting?

The project study area is predominately agricultural land use. Bishopville has a commercial main street through the center of the town, with residential uses outside of the core. Outside the Bishopville municipal boundary, land use transitions to rural farmland. Overall, the study area has not experienced development pressures or changes in land use.

Larger industrial and commercial sites are located near the I-20 interchanges at US 15 and SC 341, including the James Industrial Park off Wisacky Highway (SC 341) in the southeast and the I-20 Industrial Center off Browntown Road in the southwest. The Lee Correctional Institution is located in the southeast corner of the study area off Wisacky Highway (SC 341); a portion of Lee State Park runs through the eastern edge of the study area following the Lynches River, and Lee County Airport is located in the northeastern corner of the study area.

2.4.5 What regional and local plans exist for the study area?

Several plans have been developed to document local and regional conditions and to guide future growth for the region and Bishopville. These plans, which are discussed in more detail in **Section 4.1**, include discussion regarding truck traffic in Bishopville's central business district and the need to progress economic development. Plan excerpts relative to the project needs are noted below.

Lee County Comprehensive Plan Bishopville Project 2030 Addendum (2021)

- The addendum outlines how Lee County, the City of Bishopville, The LINK, the SLRCOG, and the SCDOT have all partnered together to find ways to improve the movability of freight goods, make the area safer for motorists, and rejuvenate and revitalize economic opportunity.
- Funded improvements include establishing an alternative route for freight-carrying vehicles, which will allow for the safe and more reliable movement of goods in and through the area.

Forward 2045: Santee-Lynches Regional Long-Range Transportation Plan (2019)

- Slower-moving freight trucks, logging trucks, and farm equipment can impact the travel times on long stretches of critical two-lane roadways (e.g., US 15), where population centers and commercial hubs are connected;
- Classified as a minor arterial roadway, US 15 serves as a key freight route through the region, carrying approximately one to two million tons of goods annually. Principal commodities transferred include lumber or wood products and non-metallic minerals;
- Wisacky Highway (SC 341), SC 441, and US 401 are anticipated to see a decrease in projected freight movements. All remaining major routes in the region will see an increase of anywhere from 77% and 267% over the next 25 years.
- US 15 and Bethune Highway (SC 341) will see an increase of up to one million tons per year in projected freight movements over the next 20 years.

Santee-Lynches 2017-2022 Comprehensive Economic Development Strategy (2017)

- The proposed Bishopville Truck Route is listed as a long-term priority project.

2.4.6 How does truck freight play a role in the project?

External rising demand for goods and services drives the need for better through-traffic connectivity in Bishopville. Neighboring county population and employment levels are forecast to grow steadily through 2050, which will likely increase through-traffic volumes in Bishopville, especially trucks connecting Darlington to the west and Kershaw to the east. Failure to address such through-traffic will continue to inhibit downtown revitalization efforts.

As illustrated in **Figure 2-1**, a majority of the truck freight that moves through Lee County travels along I-20. However, US 15 continues to provide important access to the west and south for truck freight traffic to/from Darlington County. The two primary highways accommodating truck freight through Bishopville, excluding I-20, are US 15 and SC 341. A notable share of SC 341 truck traffic north of Bishopville funnels onto US 15.

In 2011, Lee County truck freight totaled 11.8 million tons, valued at $24.5 billion, aboard over 850,000 truck units. The significant majority (96.5%) of Lee County tonnage (11.4 million tons) moves through the county, with only 2.2% outbound, 1.3% inbound, and negligible intra-county movements (78.0 tons). Most through-county movements are along I-20, with 16.3% moving from one South Carolina county to another, 22.6% outbound from South Carolina, and 28.8% inbound to South Carolina. Tonnage volume through Lee County is forecast to more than double (109.1%) by the year 2040, led by through traffic (110.7%). County outbound and inbound shipments are forecast to also grow notably (63.8 and 65.6%, respectively). However, intra-county growth is forecasted to be very low (14.3%), reflecting little anticipated economic growth. Approximately 0.5 million tons of truck freight annually moves through Bishopville on US 15, typically linking to/from I-20, although a small share continues south to Sumter County. Most of this tonnage originates or terminates in Darlington County (0.2 million, 42.9%), followed by Sumter County (0.1 million, 17.7%). More information is in the *Bishopville Truck Route Project Economic Development Report* (**Appendix I**).

2.4.7 What were some other concerns identified by the community?

Since the inception of the project, the community has expressed concerns about truck traffic through downtown Bishopville. Residents have suggested the speed and volume of heavy trucks downtown present safety concerns for business patrons because of their impact on street parking and downtown walkability. Many residents have also expressed concern that a truck route will not reduce truck traffic downtown unless it is mandatory. The assumption is that drivers (passenger and commercial) tend to choose the most efficient route. However, if the project is built, SCDOT will coordinate with local officials regarding the enforcement of no through truck traffic downtown.

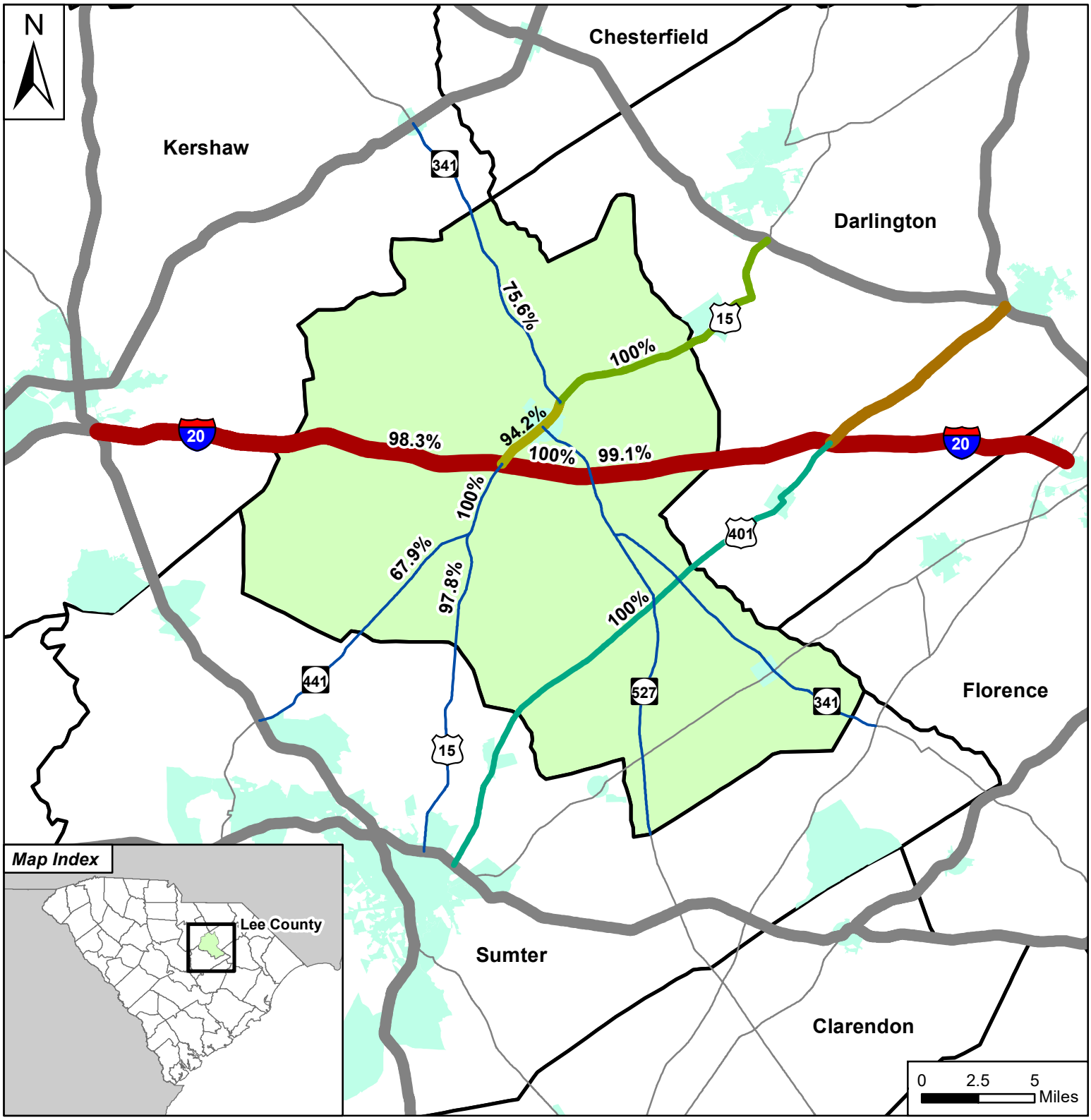
Detailed crash data was collected for crashes in the study area between January 2013 and June 2019. The crash study segments include US 15 from I-20 to Bethune Highway (SC 341), Bethune Highway (SC 341) between Lucknow Road and US 15, and Bethune Highway (SC 341) from I-20 to US 15. In total, there were 258 crashes on these routes in this area during the period. According to the data, 74% of crashes did not result in injury and no fatalities were recorded. Main Street (US 15) appears to be the focal point of crash activity, but its crash characteristics are typical for its roadway type. A review of incidents involving tractor-trailer-type vehicles revealed 26 crashes during the study period; 23 of them involved another vehicle. Although safety is not a primary or secondary purpose of the project, reducing the number of large trucks on Main Street (US 15) may improve safety downtown. For more information, the *Bishopville Truck Route Project Traffic Analysis Study* (2021) is in **Appendix A**.

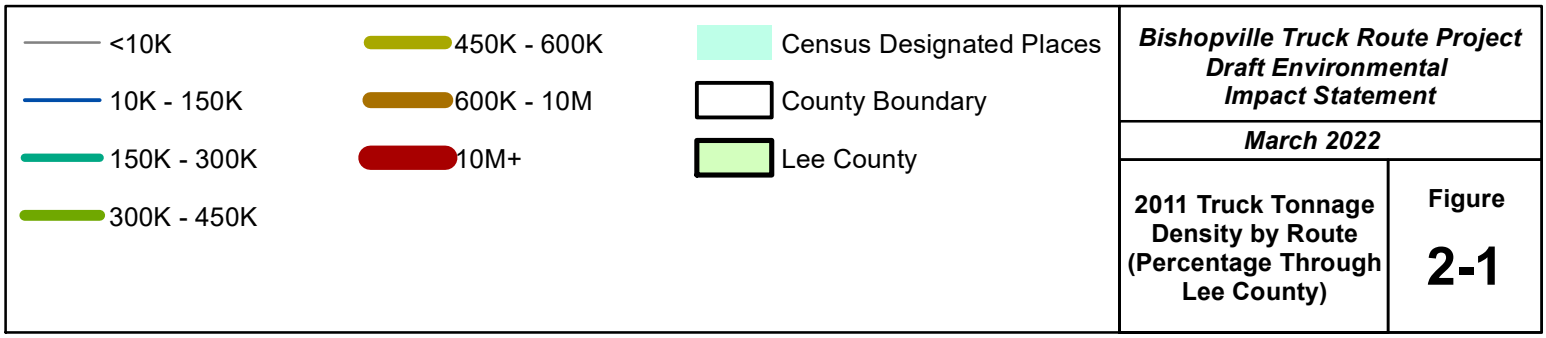
The community has also expressed concerns about the lack of economic growth in the Bishopville area. Although community input reflects the desire to redirect heavy truck traffic from downtown, many have suggested they would not support a project unless it would also provide an economic benefit. **Chapter 5** provides a summary of public involvement and agency coordination activities.

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration





Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

2011 Truck Tonnage Density by Route (Percentage Through Lee County)

Figure

2-1

3 ALTERNATIVES

3.1 How were alternatives developed for the project?

This chapter summarizes how project alternatives were developed, how detailed screening analysis was conducted, and identifies the recommended Preferred Alternative. Alternative-screening is critical to identifying project impacts and determining how well project alternatives are expected to meet the purpose and need of the project. The chapter includes an overview of the alternative-development process during the development of the Environmental Assessment (EA) and the development of this Draft Environmental Impact Statement (DEIS). The multi-level screening process provided metrics that allowed the South Carolina Department of Transportation (SCDOT) and the Federal Highway Administration (FHWA) to methodically develop and screen alternatives. The screening process used to identify the Preferred Alternative is described in detail in **Section 3.6**.

According to 40 CFR 1502.14, the identification, consideration, and analysis of alternatives are key to the *National Environmental Policy Act* (*NEPA*) process and goal of objective decision-making. The consideration of a range of alternatives leads to a solution that satisfies the transportation need and protects environmental and community resources. The Council on Environmental Quality (CEQ) refers to the alternatives analysis as the "heart of the EIS" and requires agencies to:

a. Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives that were eliminated from study, briefly discuss the reasons why they were eliminated;
b. Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits;
c. Include reasonable alternatives not within the jurisdiction of the lead agency;
d. Include the alternative of no action;
e. Identify the preferred alternative or alternatives, if one or more exists, in the Draft EIS and identify such alternative in the Final EIS unless prohibited by law;
f. Include appropriate mitigation measures not included in the proposed action or alternatives.

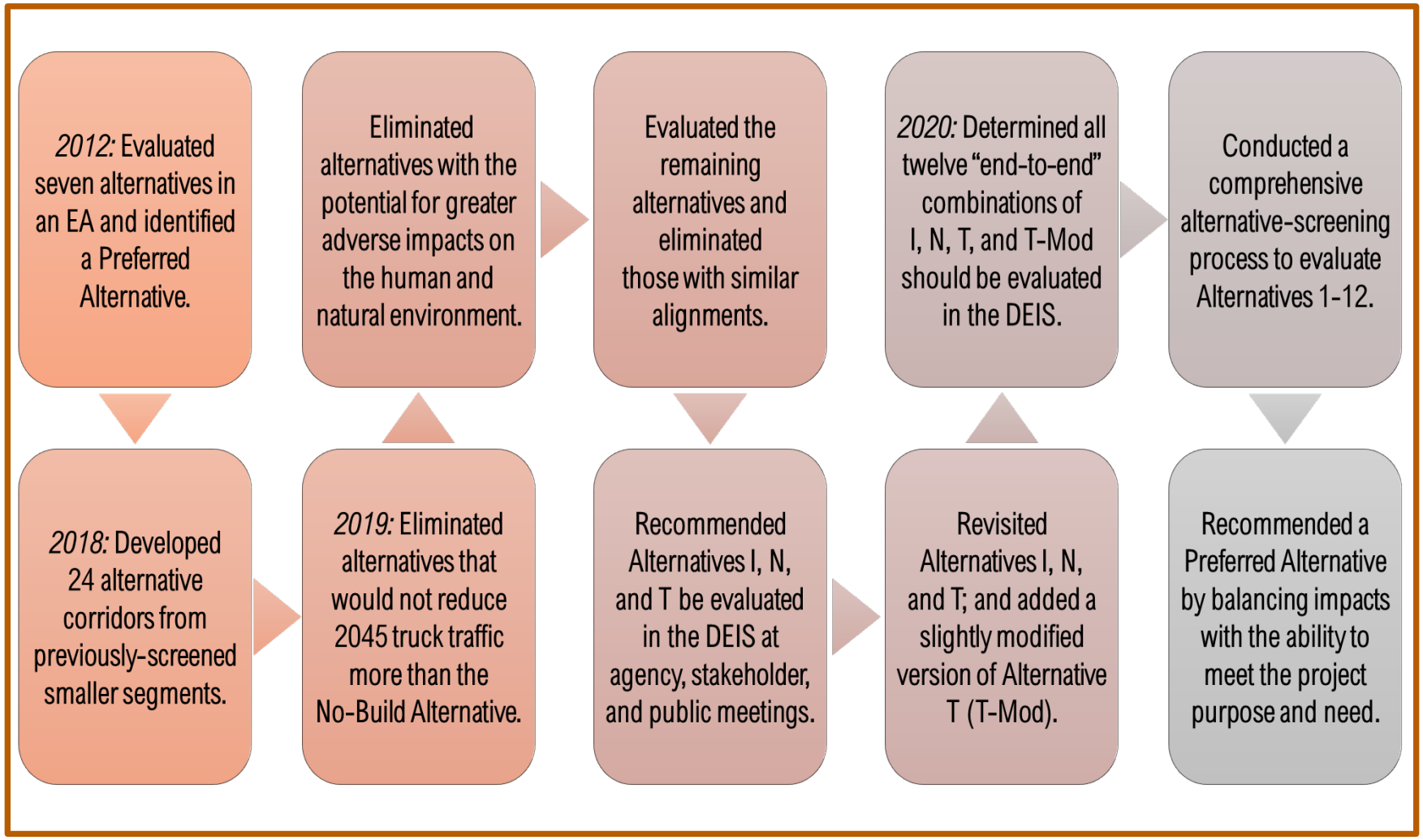
The public, local government representatives, and state and federal environmental resource and regulatory agencies had integral roles in developing the project alternatives. **Chapter 5** includes detailed information on the timing and background of public involvement and agency coordination activities, as well as the feedback obtained during the EA and DEIS development.

Federal agencies are required by *NEPA* to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). As a general rule, if an alternative does not satisfy the purpose and need for the project, it should not be included in the detailed analyses of reasonable alternatives. There are three primary reasons why an alternative might be determined to be unreasonable and eliminated from further consideration:

- The alternative does not satisfy the purpose and need for the project;
- The alternative is determined to be technically or economically impractical or infeasible; or
- The alternative substantially duplicates another alternative.

These primary reasons were used as criteria for refining alternatives in the alternative-screening process. **Exhibit 3-1** illustrates the alternative-development and screening process that was used to thoroughly evaluate the project alternatives and identify a preferred alternative.

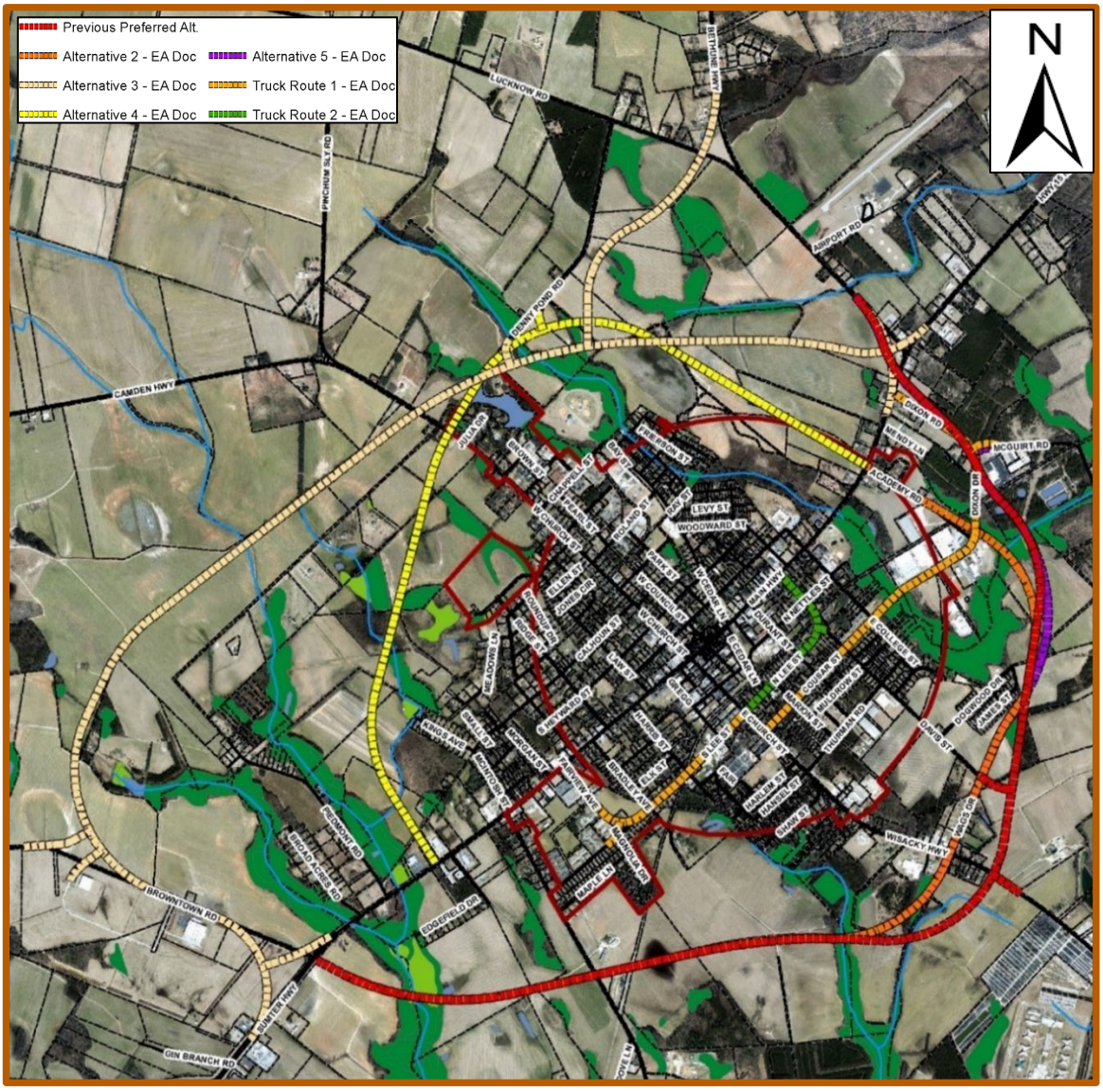
Exhibit 3-1. Alternative-Development and Screening Process



3.2 What alternatives were previously considered before the DEIS?

In 2010, the SCDOT began preparing an Environmental Assessment (EA). Several alternatives were considered, developed, evaluated, and eliminated at various stages based on available information on utilities, development plans, and zoning (**Exhibit 3-2**). Some alternatives developed for the project were eliminated early on due to their inability to meet the project purpose and need. Others were eliminated based on the severity of their impacts or fatal flaws when compared to other alternatives.

Exhibit 3-2. Environmental Assessment Alternatives



Five new location alignments were developed and analyzed in the EA: three alternatives bypassed Bishopville to the southeast and two bypassed the city to the northwest. The two alternatives in the northwest were eliminated from consideration because they were not anticipated to meet the need for promoting economic development due to a lack of existing utilities in the area and the zoning. Two of the alternatives in the southeast were eliminated because they had more potential impacts than other build alternatives.

The project team also considered two truck routes along existing roadways around the exterior of the city. Truck routes were developed to primarily use existing roadways, likely requiring some reconstruction of these existing facilities. The east/southeast side of Bishopville was identified as appropriate for options using existing routes because of the location of the commercial and industrial areas in Bishopville. The existing route alternatives did not support opportunities for economic development. In addition, the impacts of the alternatives with existing alignments to the human environment (e.g., relocations and noise) were higher than the new location alternatives. However, impacts on the natural environment (e.g., wetlands and streams) were generally lower. Finally, because the two existing route alternatives would have also impacted a potential historic district, these alternatives were subsequently eliminated from the detailed study.

Transportation Systems Management (TSM) strategies were considered during the alternative-analysis. TSM typically consists of low-cost, minor transportation improvements to increase the capacity of existing facilities. TSM improvements can be operational (e.g., traffic law enforcement, access control, turn prohibitions, speed restrictions, optimizing traffic signals) or physical (e.g., adding medians or turn lanes, realigning intersections, installing new traffic signals) to improve traffic flow. These measures generally have fewer impacts on the environment, shorter implementation schedules, and lower costs. However, the TSM approach was eliminated from further consideration because TSM strategies would not meet the purpose and need for the project, as these measures would not reduce truck traffic on Main Street (US 15) through downtown Bishopville or enhance economic development in the area.

TSM

Transportation Systems Management (TSM) strategies were considered when developing alternatives for the EA. TSM typically consists of low-cost, minor improvements to increase the capacity of existing facilities. TSM improvements can be operational (e.g., traffic law enforcement, access control, turn prohibitions, speed restrictions, optimizing traffic signals) or physical (e.g., adding medians/ lanes, realigning intersections, installing new traffic signals).

During the EA process, SCDOT engaged local officials, community leaders, stakeholders, and the general public in alternative-development. **Chapter 5** provides further details regarding the public involvement process throughout the EA. Based on an analysis of impacts and community input, SCDOT identified a preferred alternative in the EA, which was made available for public review in September 2012. A public hearing was held in November 2012 after the issuance of the EA. At the public hearing, numerous participants spoke out in opposition to the project. Furthermore, the Bishopville City Council did not support the Preferred Alternative and subsequently passed a resolution regarding their disapproval of the Preferred Alternative proposed alignment. Recent correspondence from the City of Bishopville and Lee County expressing support for the project can be found in **Appendix C** and **Appendix D**.

3.3 How were alternatives developed and screened?

In the spring of 2015, FHWA and SCDOT determined that the appropriate next step was to prepare a DEIS. In 2018, 24 new alternatives were developed for the project. From these 24 alternatives, 12 build alternatives were moved forward to be evaluated in the DEIS.

The alternative-development and screening process analyzed a wide range of potential alternatives for their ability to meet the project purpose and need while balancing the potential beneficial and adverse effects on the environment. The process consisted of the following steps:

1. **Level 1 Screening (Segment Assessment)**: The first-tier screening consisted of assessing 26 conceptual roadway segments and identifying 24 segments to be qualitatively analyzed in second-tier screening.
2. **Level 2 Screening (Quadrant Assessment)**: The second-tier screening consisted of assessing the previous 24 segments and developing longer quadrant segments that traversed entire quadrants. SCDOT then identified 24 unique "end-to-end" alternatives (Alternatives A-X) that would advance to third-tier screening. The development of these alternatives also considered existing and future land use, potential impacts on the natural and built environments, and public input/feedback.
3. **Level 3 Screening (Alternative Assessment):** The SCDOT then conducted a comprehensive alternative-screening process to screen the 24 alternatives that advanced from second-tier screening. Alternatives that would not reduce truck traffic more than the No-Build Alternative in 2045; alternatives with the potential for greater environmental impacts; and alternatives with similar alignments were eliminated.
4. **Initial Build Alternatives**: From Alternatives A-X, three initial alternatives (Alternatives I, N, and T) anticipated to best meet the project's purpose and need were identified by SCDOT for further evaluation. A modified version of Alternative T was later added by SCDOT and FHWA.
5. **Build Alternatives**: SCDOT and FHWA decided to analyze all 12 "end-to-end" combinations of Alternatives I, N, T, and T-Modified; and renamed them Alternatives 1-12. These 12 build alternatives are evaluated in detail in this DEIS.
6. **Preferred Alternative:** In addition to traffic screening factors, including the projected truck traffic downtown in 2045, Alternatives 1-12 and the No-Build Alternative were analyzed using environmental, social, and cost-related screening factors. Based on the analyses presented in this DEIS, SCDOT is proposing Alternative 6 as the Preferred Alternative. However, an alternative will not be selected until after the conclusion of the DEIS comment period.

3.3.1 What was the level 1 screening process?

The first-tier screening evaluated 26 conceptual roadway segments for their ability to meet the project's purpose and need. Since detailed alignments would not be developed until later in project development, a 500-foot conceptual roadway corridor was used to qualitatively assess the potential impacts of the segments. After eliminating two of the segments, SCDOT identified 24 preliminary conceptual segments (22 500-foot wide segments and two 1,100-foot segments) to be evaluated further in a qualitative second-tier screening (**Figure 3-1**). The two 1,100-foot wide segments were reduced to 500 feet before second-tier screening to ensure a comparable assessment of impacts.

3.3.2 What was the level 2 screening process?

SCDOT determined that assessing longer segments that traversed entire quadrants of the study area would benefit the screening process. The quadrant level analysis consisted of looking at longer quadrant segments in the four quadrants between Main Street and Church Street (**Figure 3-1**). The longer quadrant segments were then used to create 24 complete "end-to-end" reasonable alternatives (Alternatives A-X) that would be analyzed further and included in initial traffic modeling.

3.3.3 What was the level 3 screening process?

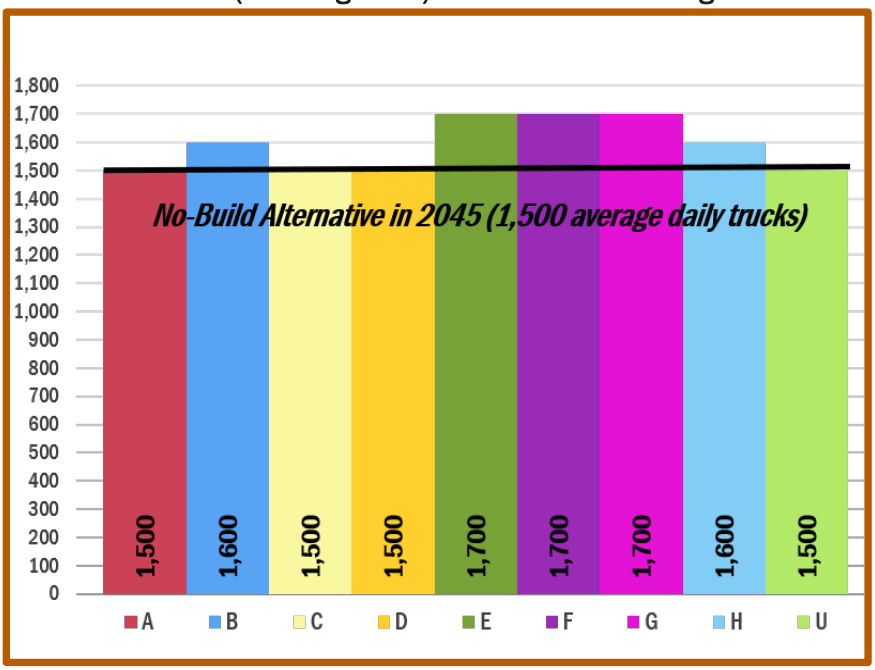
Once Alternatives A-X (**Figure 3-2**) were identified in second-tier screening, SCDOT conducted comprehensive alternative-screening to narrow down the alternatives. Screening factors included:

- Community Resources (Schools, Fire, Police, Libraries, and Churches);
- Farmland Irrigation Systems and Easements;
- Farmland of Statewide Importance and Prime Farmland;
- Hazardous Materials and Sites;
- Historic Places and Districts;
- Low-Income and Minority Populations;
- Natural Heritage Program Species, Communities, and Habitat;
- Parks, Recreation Areas, Section 4(f) Resources; and LWCF/Section 6(f) Sites
- Regulatory Floodplains;
- Residential, Commercial, Industrial, Municipal, and Agricultural Properties; and
- Wetlands, Streams, and Ponds.

Alternatives A-X and the No-Build Alternative were analyzed using a high-level statewide travel-demand traffic model to forecast future (2045) traffic to assess whether or not the alternatives would reduce truck traffic on Main Street.

The initial planning-level forecasts for Alternatives A-X were compared to the initial planning-level forecast of 1,500 trucks/day for the No-Build Alternative (this estimate was later refined to 3,200 trucks/day in more detailed engineering-level modeling [**Section 3.4.4.3**]).

Exhibit 3-3. Initial (Planning-Level) 2045 Traffic Modeling Results



Using the initial planning-level traffic modeling results, the alternatives (Alternatives A, B, C, D, E, F, G, H, and U) that were not anticipated to meet the project purpose and need of reducing downtown truck traffic in 2045 were eliminated (**Exhibit 3-3** and **Figure 3-3a-3c**). Alternatives with the potential for greater environmental impacts were eliminated as were alternatives with similar alignments (Alternatives J, K, L, M, O, P, Q, R, S, V, W, and X) (**Figure 3-4a-4d**). Segment 1 (one of the 24 conceptual segments) was also eliminated to avoid unnecessary stream impacts.

South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration

Preliminary and Subject to Change

N

BETHUNE HWY
HWY 15 N
CAMDEN HWY
W CHURCH ST
N MAIN ST
S MAIN ST
E CHURCH ST
WILKINSON RD
WISACKY HWY
BROWNTOWN RD
SUMTER HWY
ST CHARLES RD

Northwest Quadrant
Northeast Quadrant
Southwest Quadrant
Southeast Quadrant

0 0.5 1 Miles

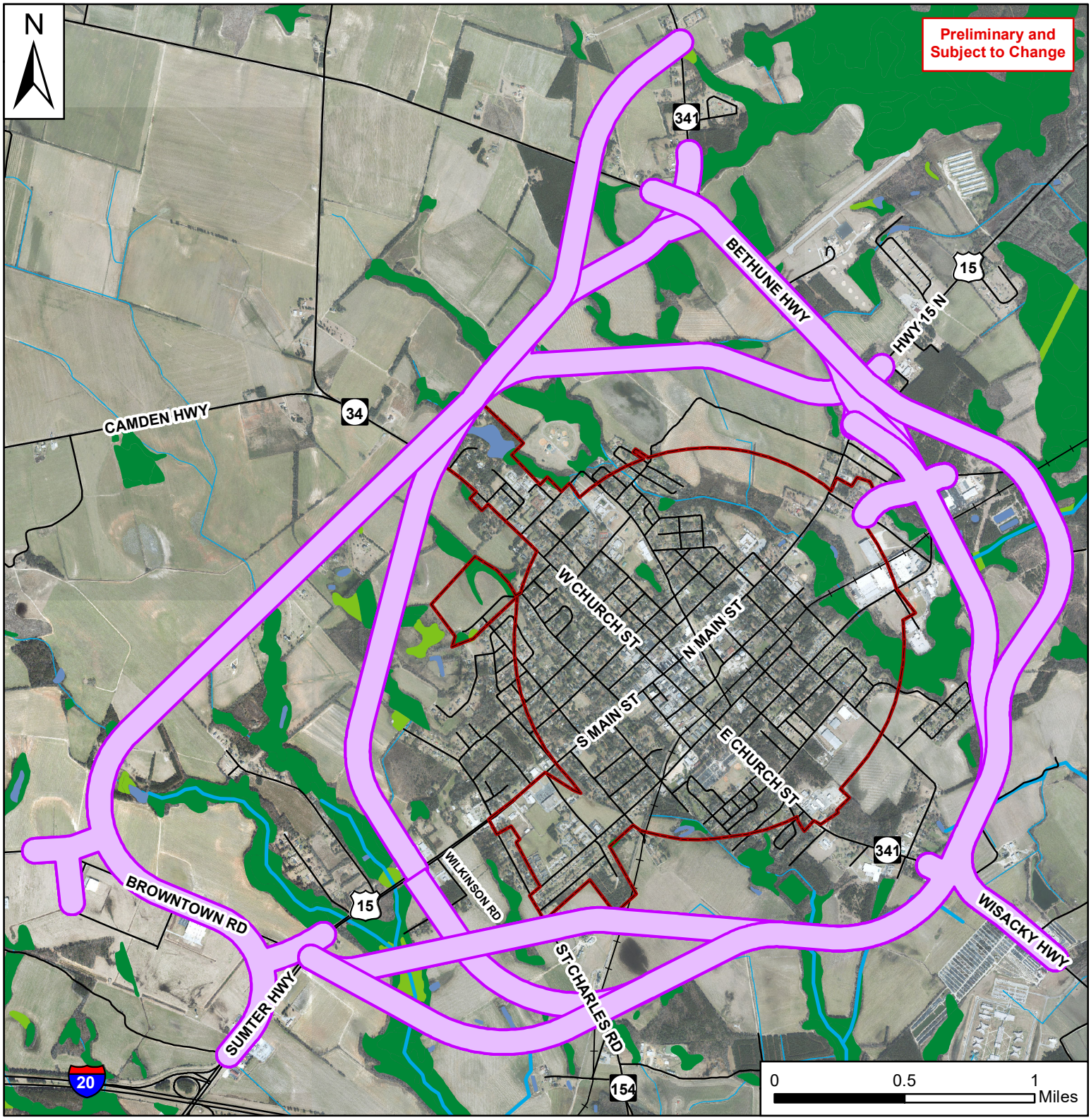
- Rivers and Streams
- Road
- SCRF Railroad
- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Municipal Boundary
- NE Quadrant
- NW Quadrant
- SE Quadrant
- SW Quadrant
- Segment 1 (500 ft)
- Segment 2 (500 ft)
- Segment 3 (500 ft)
- Segment 4 (500 ft)
- Segment 5 (500 ft)
- Segment 6 (500 ft)
- Segment 7 (500 ft)
- Segment 8 (500 ft)
- Segment 9 (500 ft)
- Segment 10 (500 ft)
- Segment 11 (500 ft)
- Segment 12 (500 ft)
- Segment 13 (500 ft)
- Segment 14 (1,100 ft)
- Segment 15 (500 ft)
- Segment 16 (500 ft and 1,100 ft)
- Segment 17 (500 ft)
- Segment 19 (500 ft)
- Segment 20 (500 ft)
- Segment 21 (500 ft)
- Segment 22 (500 ft)
- Segment 24 (500 ft)
- Segment 25 (500 ft)
- Segment 26 (500 ft)

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

Level 1 and 2 Screening – Alternative Corridor Segments and Quadrants

Figure 3-1



- Rivers and Streams
- Road
- SCRF Railroad
- Alternative Corridors A-X
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

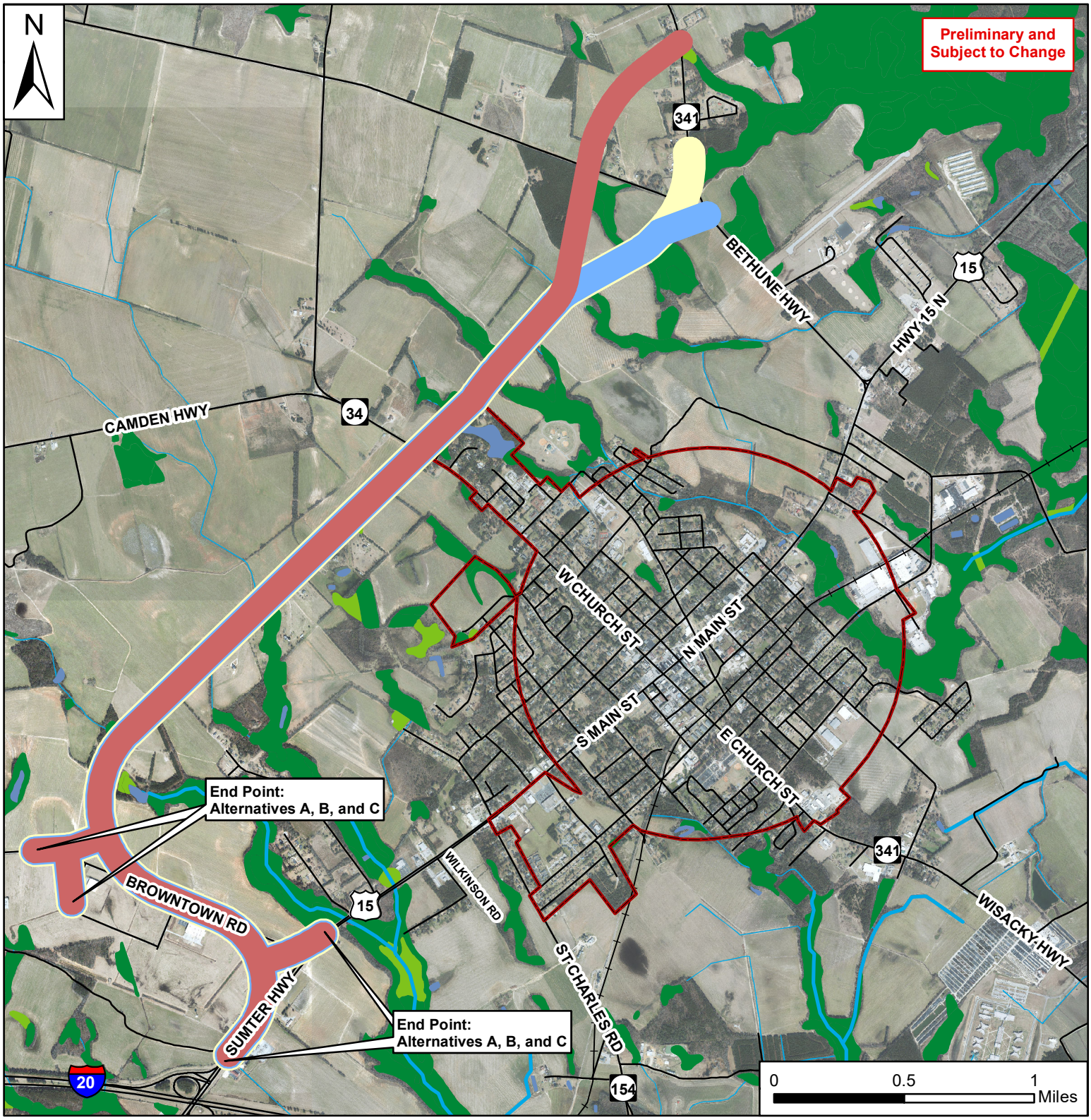
Level 3 Screening – Alternative Corridors A-X

Figure 3-2

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Rivers and Streams
- Road
- SCRF Railroad
- Alternative A
- Alternative B
- Alternative C
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

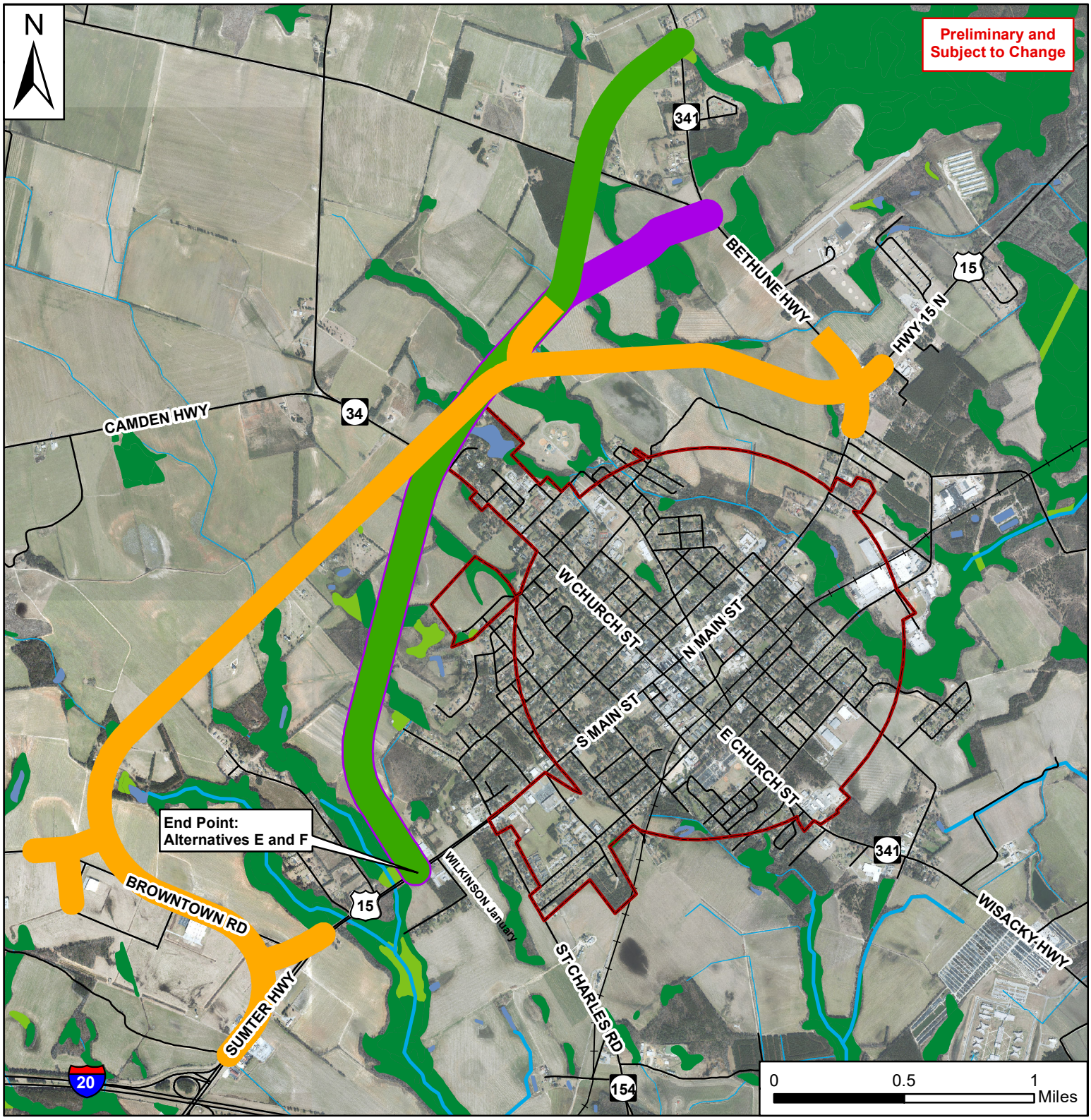
Level 3 Screening – Eliminated Alternative Corridors A, B, and C

Figure
3-3a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Rivers and Streams
- Road
- SCRF Railroad
- Alternative D
- Alternative E
- Alternative F
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Level 3 Screening – Eliminated Alternative Corridors D, E, and F

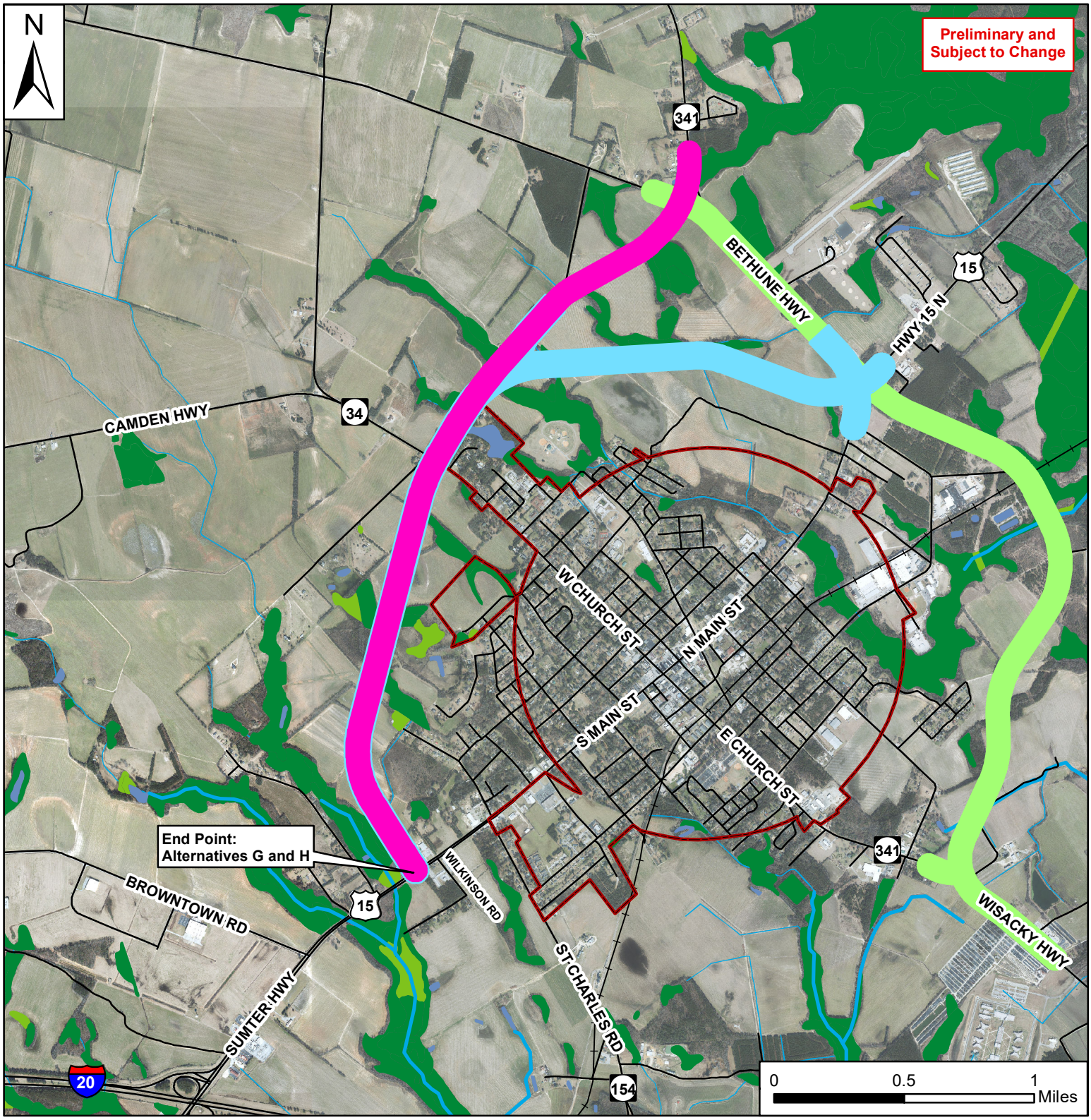
Figure

3-3b

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Rivers and Streams
- Road
- SCRF Railroad
- Alternative G
- Alternative H
- Alternative U
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

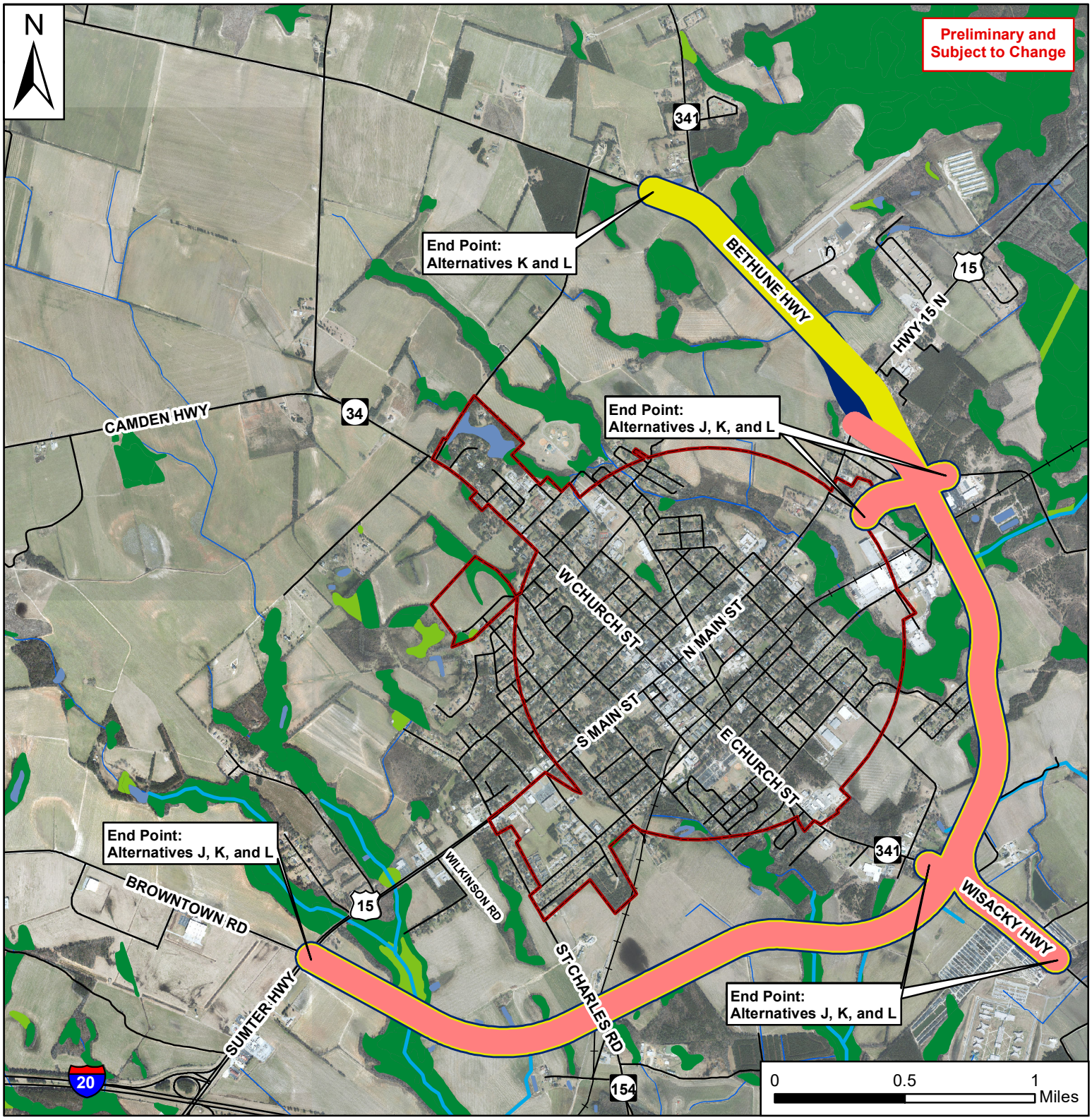
Level 3 Screening – Eliminated Alternative Corridors G, H, and U

Figure
3-3c

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Rivers and Streams	Alternative L
Road	Freshwater Emergent Wetland
SCRF Railroad	Freshwater Forested/Shrub Wetland
Alternative J	Freshwater Pond
Alternative K	Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

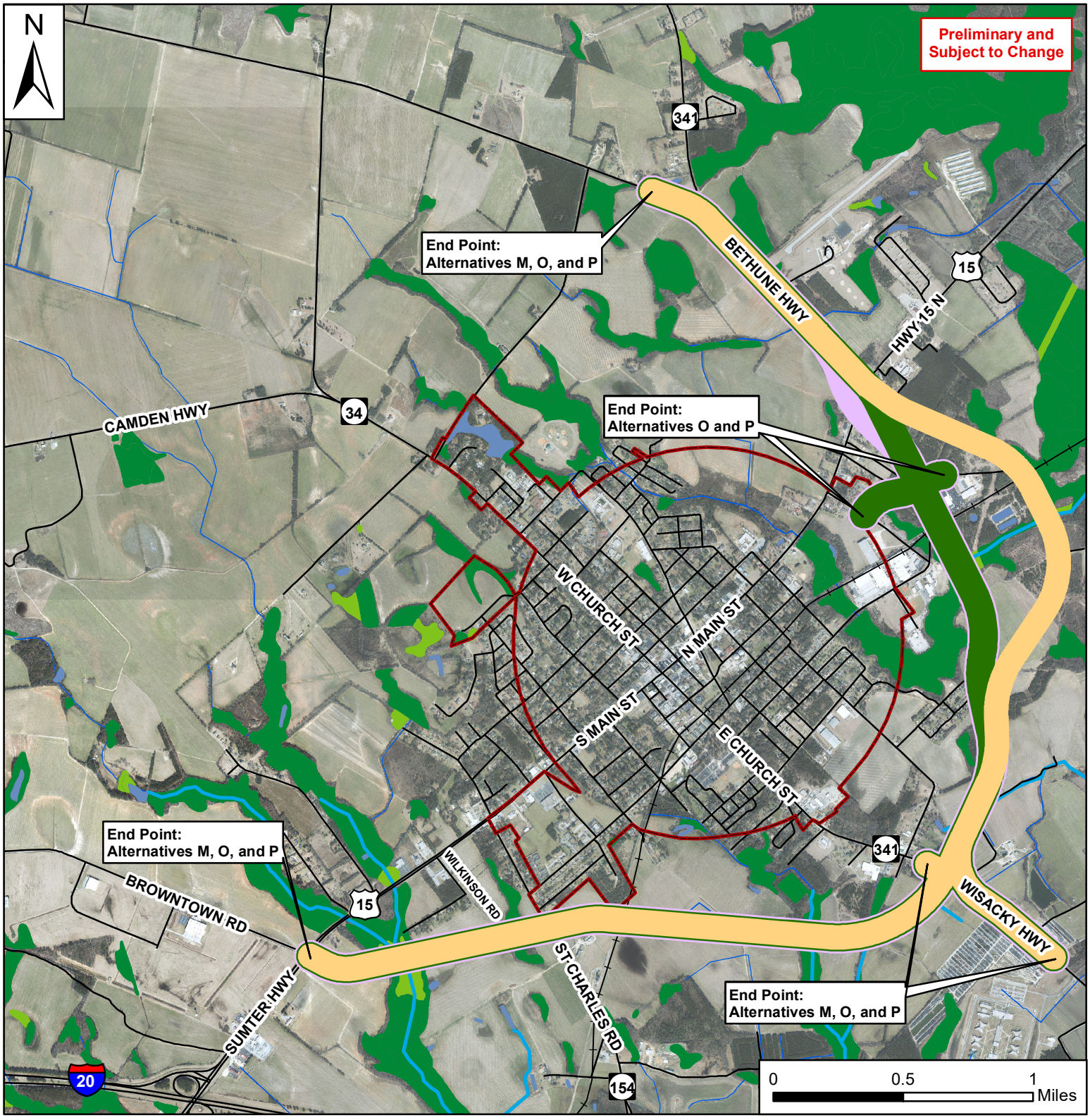
Level 3 Screening – Eliminated Alternative Corridors J, K, and L

Figure 3-4a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Rivers and Streams
- Road
- SCRF Railroad
- Alternative M
- Alternative O
- Alternative P
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

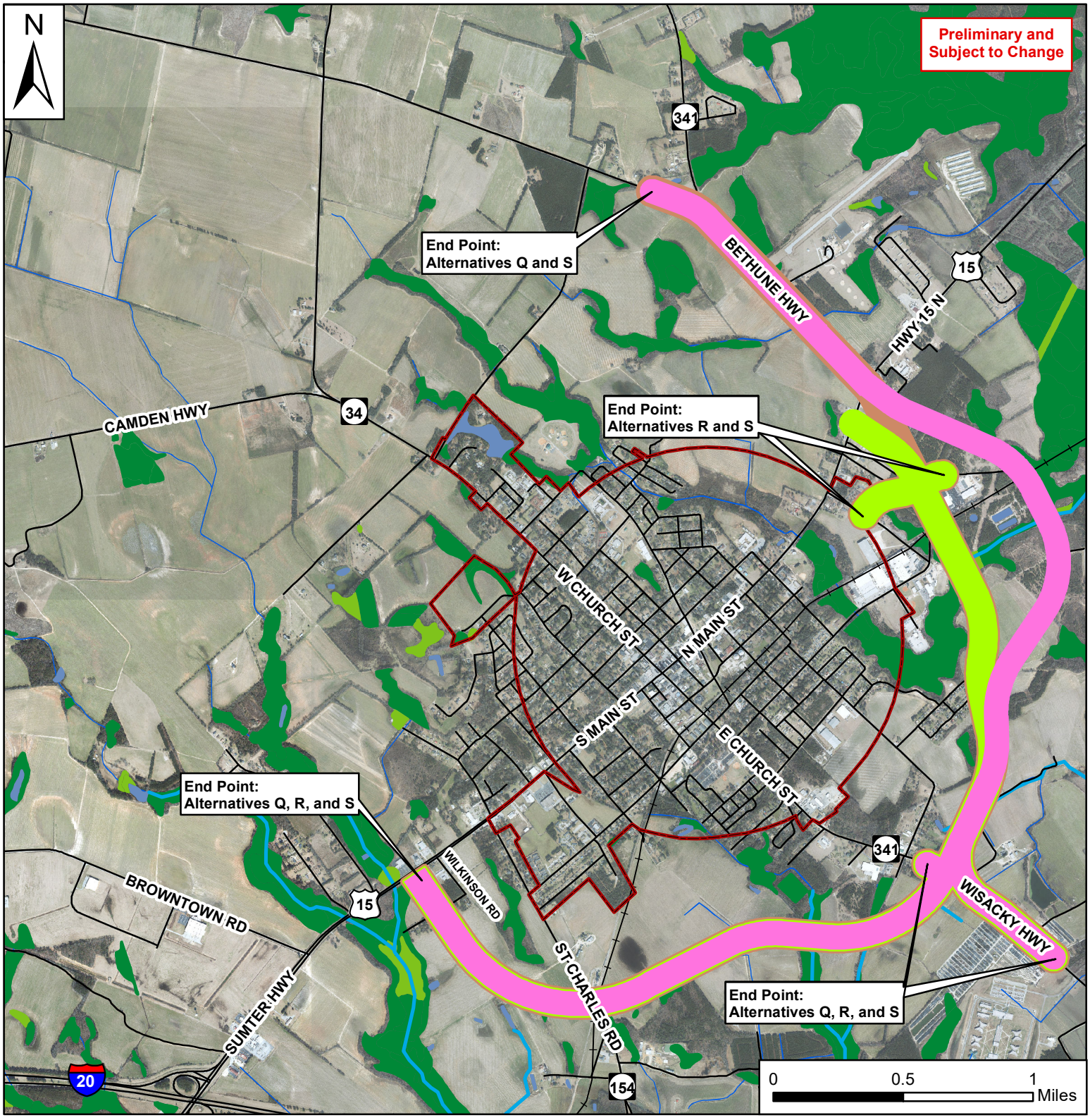
Level 3 Screening – Eliminated Alternative Corridors M, O, and P

Figure
3-4b

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Rivers and Streams	Alternative S
Road	Freshwater Emergent Wetland
SCRF Railroad	Freshwater Forested/Shrub Wetland
Alternative Q	Freshwater Pond
Alternative R	Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

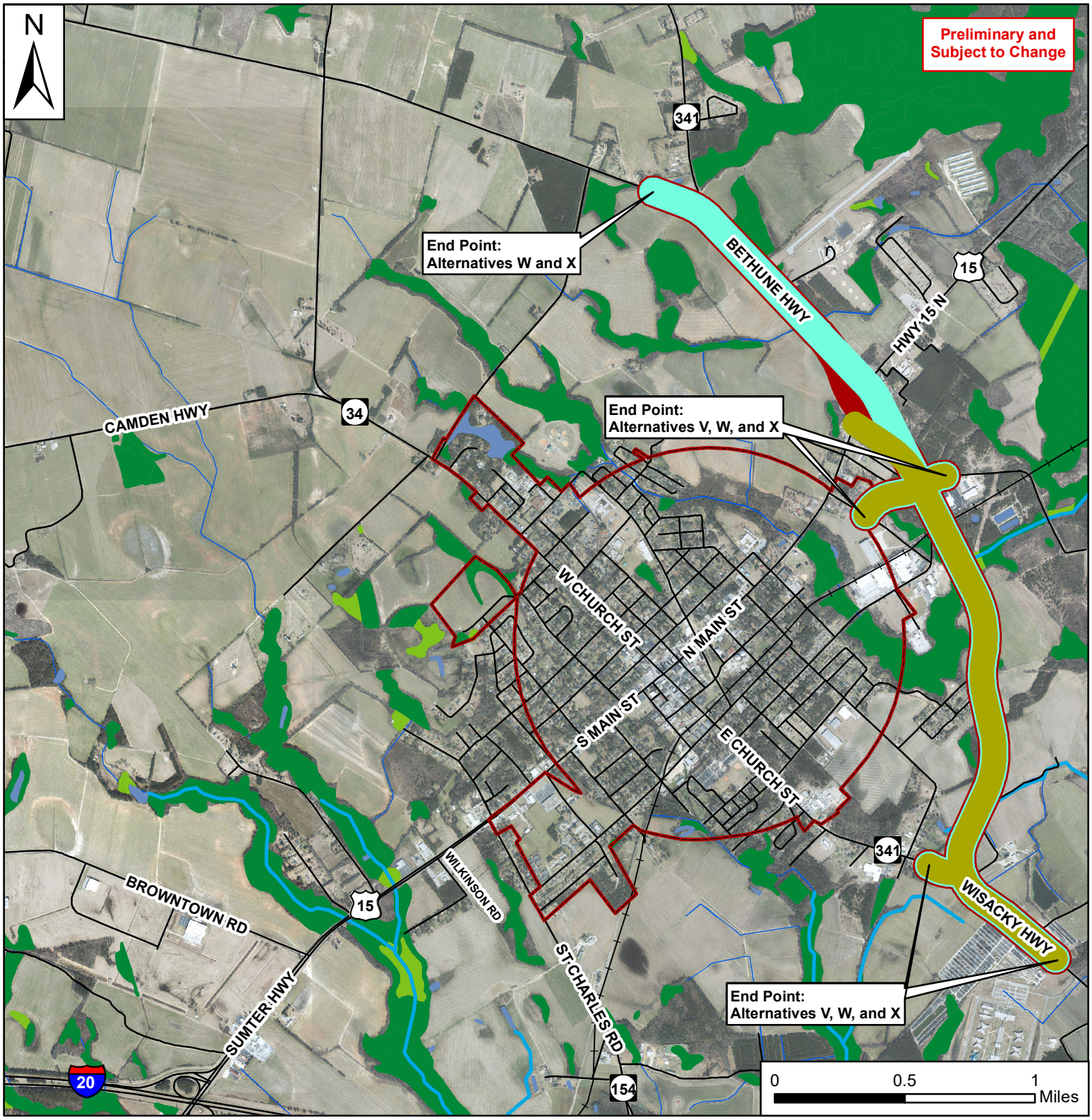
Level 3 Screening – Eliminated Alternative Corridors Q, R, and S

Figure 3-4c

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Rivers and Streams
- Road
- SCRF Railroad
- Alternative V
- Alternative W
- Alternative X
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Level 3 Screening – Eliminated Alternative Corridors V, W, and X

Figure
3-4d

3.4 How were the proposed build alternatives identified?

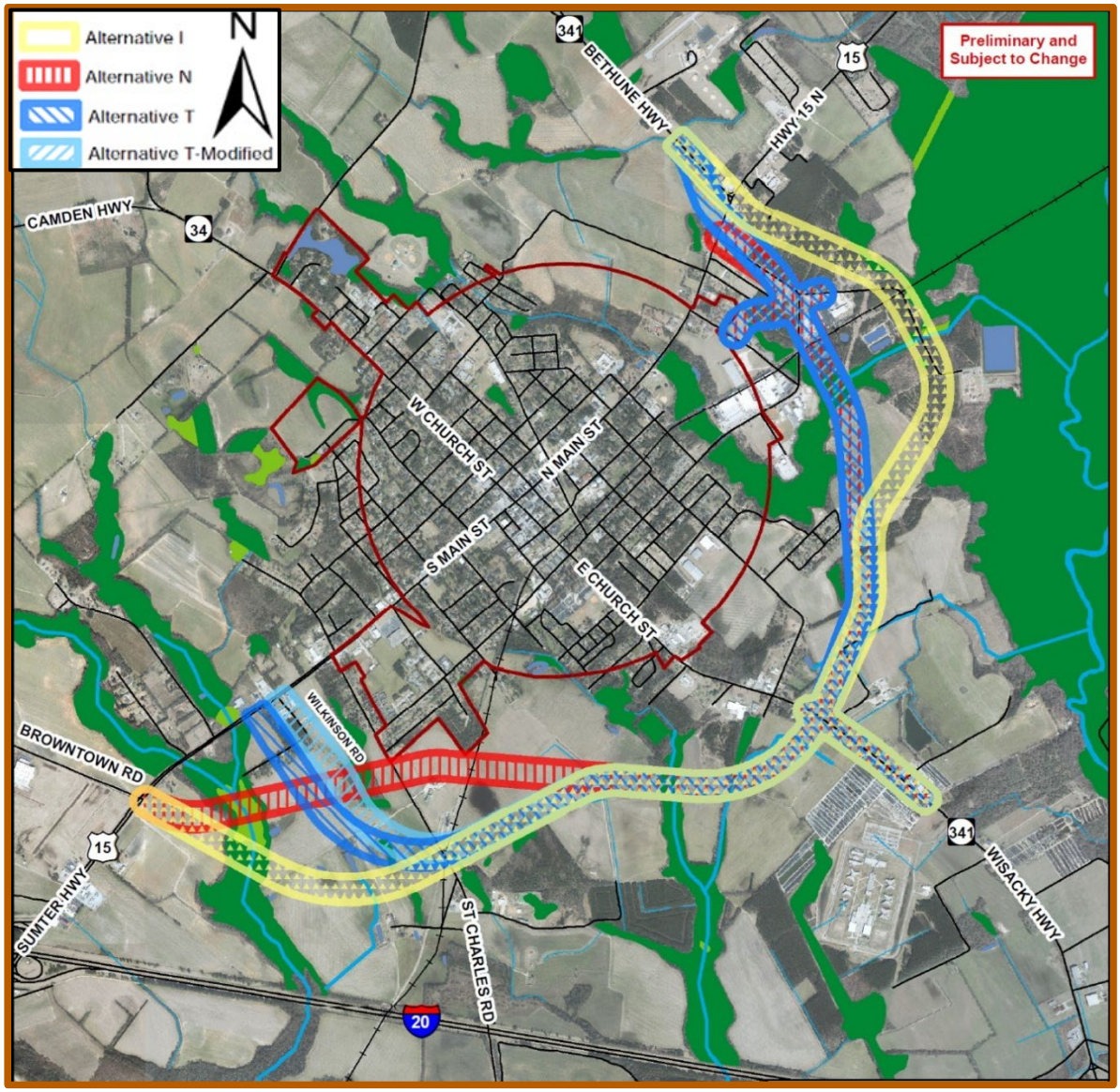
3.4.1 What were the initial proposed build alternatives?

After completing the preliminary multi-level screening process described above, SCDOT identified three reasonable alternatives (Alternatives I, N, and T) that were anticipated to meet the project's purpose and need to be evaluated further in the DEIS. SCDOT presented these alternatives at an Agency Coordination Effort (ACE) Meeting on August 8, 2019, and at a stakeholder meeting and public information meeting on August 22, 2019. Public involvement materials can be found in **Appendix C** and agency correspondence can be found in **Appendix D**.

3.4.2 What is Alternative T-Modified?

After the August 22, 2019, public information meeting, SCDOT and FHWA revisited the three proposed alternatives (I, N, and T) presented to the public and modified a 0.6-mile section of Alternative T near the southern/western terminus along Wilkinson Road, resulting in Alternative T-Modified (T-Mod). Alternatives I, N, T, and T-Modified are shown in **Exhibit 3-4** and **Figure 3-5**.

Exhibit 3-4. Alternatives I, N, T, and T-Modified



3.4.3 Why is SCDOT evaluating 12 build alternatives?

In January 2020, SCDOT and FHWA decided to analyze all 12 "end-to-end" combinations of Alternatives I, N, T, and T-Modified as build alternatives in the EIS and renamed them Alternatives 1-12 (as shown in **Figure 3-6a-6l**). The SCDOT also conducted additional engineering-level traffic analysis to further evaluate the impacts of the alternatives. This traffic analysis modeled the effect of the proposed alternatives on congestion, travel time, and safety on the study's existing and proposed routes. Existing (2015) and projected future (2045) traffic volumes, travel time studies, and recent crash data were analyzed to compare existing conditions to expected future conditions with and without the project. Existing traffic conditions and results of the traffic modeling are detailed in the *Bishopville Truck Route Project Traffic Analysis Study* (2021), which is located in **Appendix A**. In addition to analyzing traffic screening factors, the 12 build alternatives were analyzed using natural resources, community, land use, and cost-related screening factors. These screening factors are discussed in further detail in **Chapter 4**.

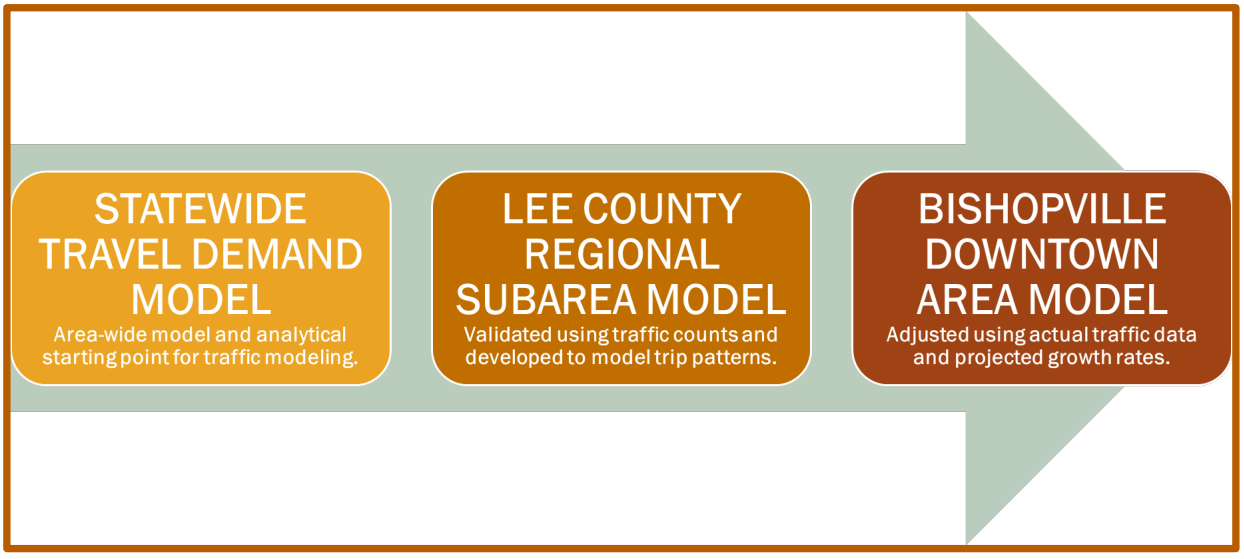
3.4.4 How was traffic modeling used to screen the build alternatives?

Because the purpose of the project is to reduce truck traffic on Main Street (US 15) in downtown Bishopville, the main screening criterion for identifying build alternatives was the estimated average daily truck traffic in downtown Bishopville in 2045. The traffic analysis included three important models that are described below: the Statewide Travel Demand Model, the Lee County Model, and the Bishopville Downtown Area Model (**Exhibit 3-5**). More information on the traffic analysis and the screening process can be found in the *Bishopville Truck Route Project Traffic Analysis Study* (2021), which is located in **Appendix A**.

3.4.4.1 Statewide Travel Demand Model

The South Carolina Statewide Model Version 4 (SCSWMv4) was the analytical starting point model for the Bishopville Truck Route Project traffic modeling. The SCSWMv4 is a four-step Statewide Travel Demand Model that models trip generation, trip distribution, mode split, and traffic assignment. Typically, travel demand models are used for area-wide travel estimates rather than determining actual volumes for low volume, rural roadways.

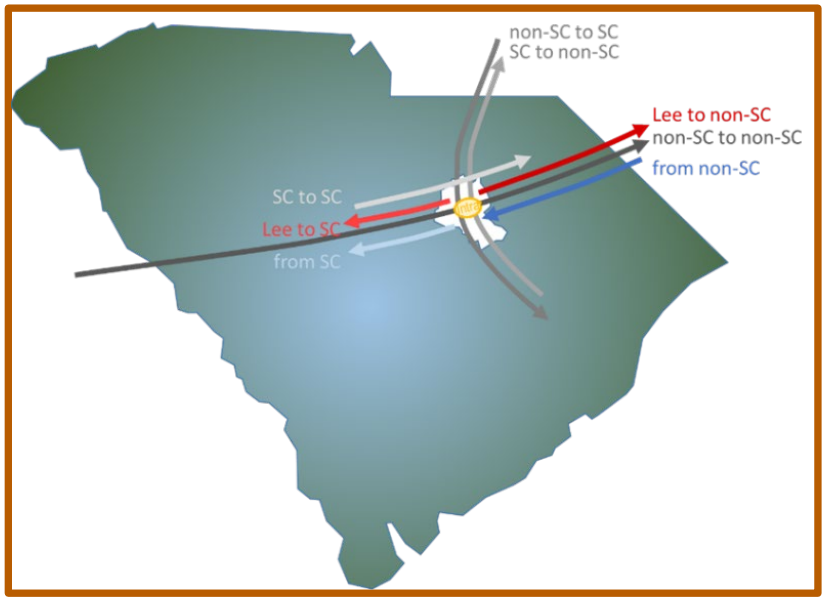
Exhibit 3-5. Traffic Modeling Methodology



3.4.4.2 Lee County Regional Subarea Model

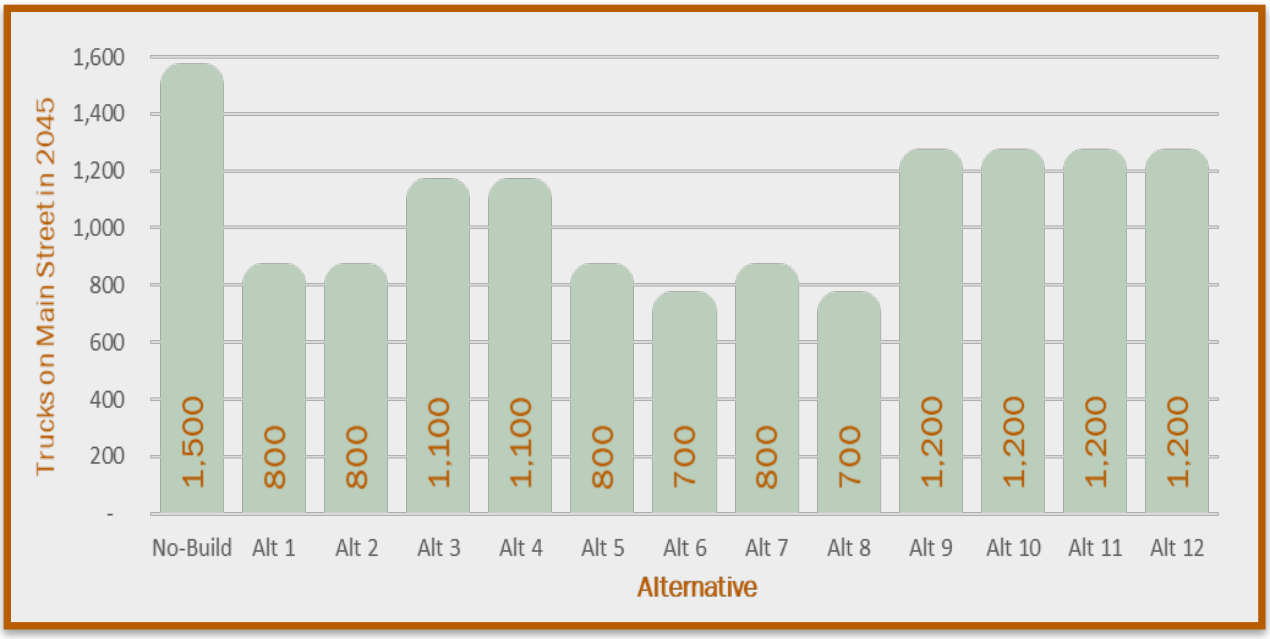
Calibrating and validating a regional travel demand model was an extensive effort in the early development and evaluation of alternatives. Early on in the project planning process, a Lee County Regional Subarea Model was extracted for the 2015 base year and 2045 forecast year. It is important to note that subarea models are not full four-step travel demand models. Therefore, the subarea model was validated using observed 2015 counts and developed to model trip patterns and highway link volume flows from the four-step SCSWMv4 model. Daily traffic volumes were collected at multiple locations in 2015 to evaluate traffic conditions and Origin-Destination (O-D) patterns (**Exhibit 3-6**). These volumes were used to estimate vehicle classifications and planning-level traffic volumes on study corridors.

Exhibit 3-6. Traffic Origins and Destinations



The initial planning-level 2045 traffic modeling results are shown in **Exhibit 3-7**. All twelve build alternatives are expected to reduce future (2045) truck traffic in downtown Bishopville.

Exhibit 3-7. Initial (Planning-Level) 2045 Traffic Modeling Results



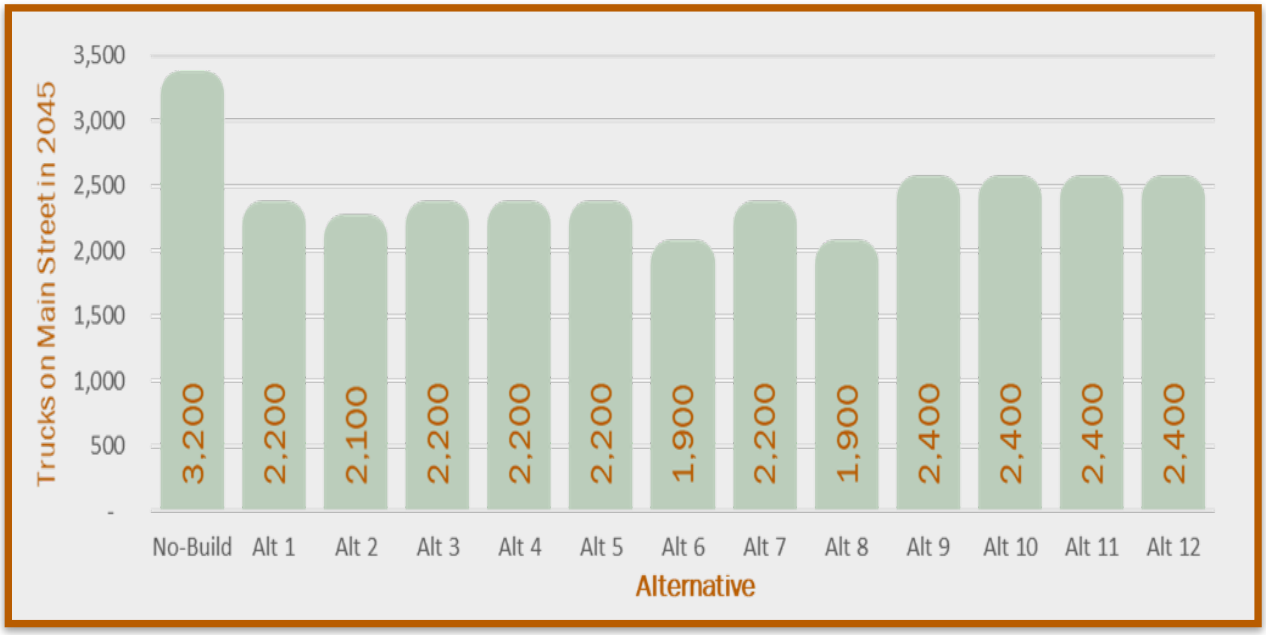
3.4.4.3 Bishopville Downtown Area Model

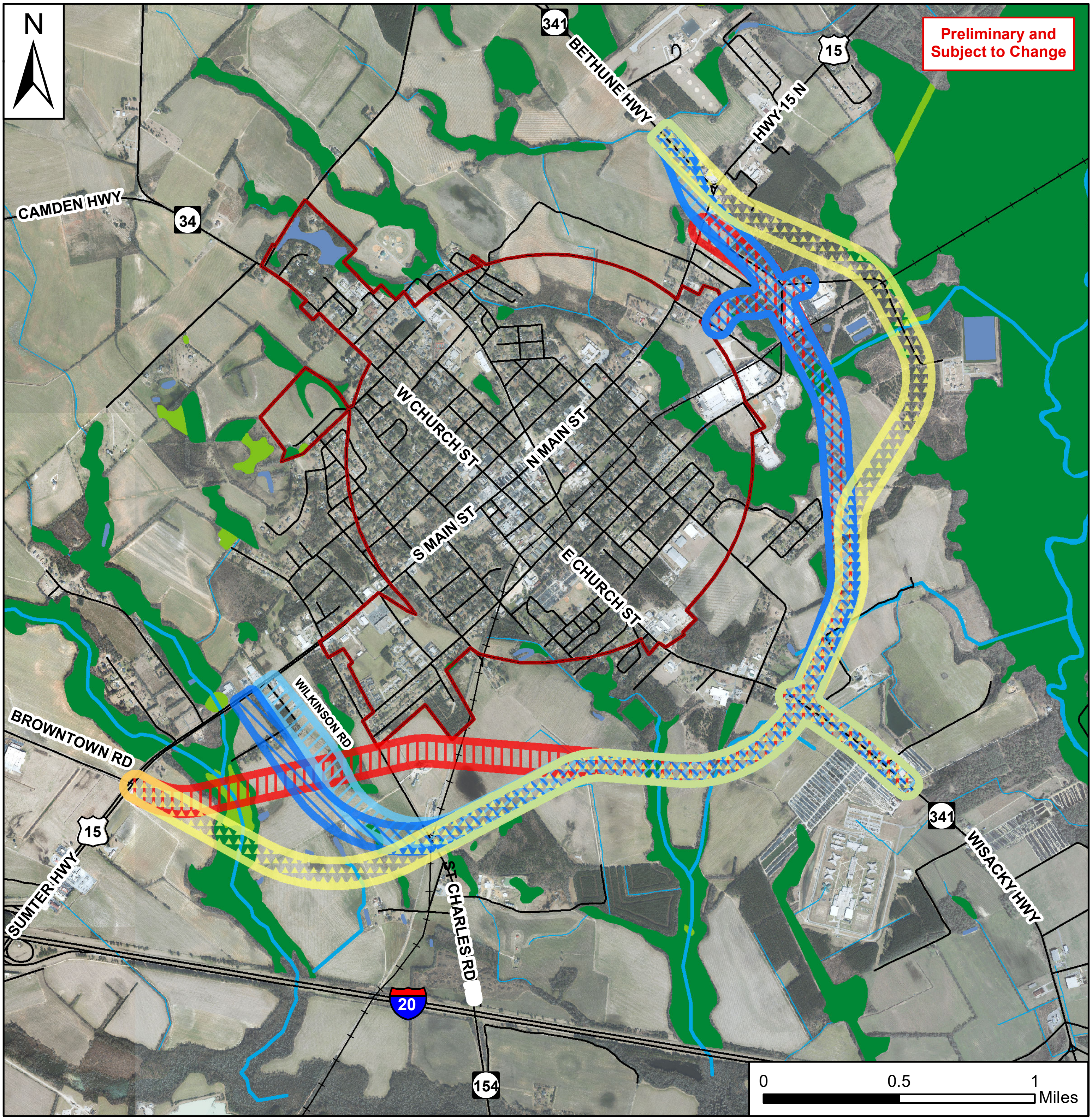
For the later phases of traffic modeling and analysis, additional engineering-level analyses were performed using the Bishopville Downtown Area Model. Travel demand models are intended to be used to estimate daily traffic volumes for large areas and are therefore not typically calibrated to replicate peak hour turning movements at the local level. This is due to the standards for calibration and replication of traffic volume estimation on such roadways, as well as the design of the travel demand model. Instead of relying on the travel demand model for volume information, the model was used to determine the proportion of vehicles that will divert to the proposed alternative routes and to develop growth rates for future volumes that reflect the effect land use may have on regional traffic flow and overall traffic growth. These growth rates were then used to identify an average factor for total traffic growth between the model base year (2015) and forecast year (2045).

While the forecasted traffic volumes from the two stages differ, the results of the analysis do not change because the difference represents a proportional shift in volume, not a fundamental change in travel patterns. These resulting forecast volumes are used for more detailed studies including peak hour capacity analysis, travel time estimates, and noise modeling.

The more detailed engineering-level 2045 traffic modeling results are shown in **Exhibit 3-8**. All twelve build alternatives are expected to reduce future (2045) truck traffic in downtown Bishopville.

Exhibit 3-8. Detailed (Engineering-Level) 2045 Traffic Modeling Results





- Rivers and Streams
- Road
- SCRF Railroad
- Alternative I
- Alternative N
- Alternative T
- Alternative T-Modified
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Municipal Boundary

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

Initial Proposed Build Alternatives and T-Modified

Figure 3-5

3.5 What alternatives are being evaluated in this DEIS?

SCDOT conducted an extensive alternative-screening process on the No-Build Alternative and 12 build alternatives (Alternatives 1-12), which are described in detail below.

3.5.1 What is the No-Build Alternative?

Under the provisions of *NEPA*, the effects of not implementing the proposed action (or the No-Build Alternative) must also be considered in the decision-making process. Analysis of the No-Build Alternative must discuss the existing conditions and what would be reasonably expected to occur in the foreseeable future if the proposed project is not constructed. The No-Build Alternative also provides a baseline for comparing the impacts of the build alternatives.

3.5.2 What is Alternative 1 (Formerly Alternative I)?

Alternative 1 (**Figure 3-6a**) is a three-lane roadway consisting of two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 5.50 miles long and begins at the intersection of Sumter Highway (US 15) and Browntown Road. From there, it heads southeast for approximately nine-tenths of a mile (0.94 miles) and intersects Dove Lane, then heads northeast for approximately one-quarter of a mile (0.27 miles) where it intersects with the South Carolina Central Railroad (SCRF) and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 1 then heads slightly northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast approximately four-tenths of a mile (0.43 miles) and intersects Wisacky Highway (SC 341). Alternative 1 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. From there, it continues northeast for approximately one mile (1.08 miles) where it follows McGuirt Road for approximately four-tenths of a mile (0.36 miles) and crosses the SCRF a second time. This railroad crossing would require modification of the existing at-grade crossing with McGuirt Road. It then heads northwest for approximately seven-tenths of a mile (0.68 miles), connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15), and follows Bethune Highway (SC 341) for approximately three-tenths of a mile (0.31 miles) before ending. Alternative 1 proposes five new stream crossings and replaces two stream crossings at Jordan Lane and McGuirt Road.

3.5.3 What is Alternative 2 (Formerly Alternative N)?

Alternative 2 (**Figure 3-6b**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 4.64 miles long and begins at the intersection of Sumter Highway (US 15) and Browntown Road. It then continues slightly northeast for approximately one mile (0.96 miles) and intersects St. Charles Road (SC 154). From there, it heads east for one-quarter of a mile where it crosses the SCRF. This proposed railroad crossing is in a new location and would likely require construction of a new grade-separated crossing due to the proximity of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 2 then heads slightly southeast for approximately one-half of a mile (0.49 miles) where it intersects Bradley Avenue, then continues southeast for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 2 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.28 miles), crossing the SCRF a second time, to just west of the intersection of McGuirt Road and Dixon Drive, and continues northwest along Dixon Drive for approximately four-tenths of a mile (0.42 miles) and ends at a new intersection with Main Street (US

15). This railroad crossing is in a new location and would require construction of a new crossing. This alternative provides a connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 2 proposes five new stream crossings and replaces one stream crossing at Jordan Lane.

3.5.4 What is Alternative 3 (Formerly Alternative T)?

Alternative 3 (**Figure 3-6c**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 4.76 miles long and begins approximately one-tenth of a mile (0.08 miles) southwest of the intersection of Sumter Highway (US 15) and Wilkinson Road. From there, it heads southeast for approximately two-tenths of a mile (0.18 miles) and intersects Edgefield Drive, then continues southeast for approximately four-tenths of a mile (0.43 miles) where it intersects with Dove Lane. It then heads southeast for approximately three-tenths of a mile (0.27 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 3 then heads northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 3 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.31 miles), crossing the SCRF a second time, to the intersection of McGuirt Road and Dixon Drive. This railroad crossing is in a new location and would require construction of a new crossing. From there, it heads northwest just north of Dixon Drive for four-tenths of a mile (0.40 miles) before intersecting Main Street (US 15). It then heads northeast for approximately four-tenths of a mile (0.37 miles) and connects with Bethune Highway (SC 341). This alternative provides a connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 3 proposes four new stream crossings and replaces one stream crossing at Jordan Lane.

3.5.5 What is Alternative 4 (Formerly Alternative T-Modified)?

Alternative 4 (**Figure 3-6d**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 4.75 miles long and begins at the intersection of Sumter Highway (US 15) and Wilkinson Road. From there, it heads southeast along Wilkinson Road for approximately two-tenths of a mile (0.18 miles) and intersects Edgefield Drive, then continues southeast for four-tenths of a mile (0.40 miles) where it intersects Dove Lane. It then continues southeast for approximately three-tenths of a mile (0.26 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 4 then heads northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 4 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.31 miles), crossing the SCRF a second time, to the intersection of McGuirt Road and Dixon Drive. This railroad crossing is in a new location and would require construction of a new crossing. From there, it heads northwest just north of Dixon Drive for four-tenths of a mile (0.40 miles) before intersecting Main Street (US 15). It then heads northeast for approximately four-tenths of a mile (0.37 miles) and connects with Bethune Highway (SC 341). This alternative provides a

connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 4 proposes four new stream crossings and replaces one stream crossing at Jordan Lane.

3.5.6 What is Alternative 5 (I in the South/N in the North)?

Alternative 5 (**Figure 3-6e**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 4.77 miles long and begins at the intersection of Sumter Highway (US 15) and Browntown Road. From there, it heads southeast for approximately nine-tenths of a mile (0.94 miles) and intersects Dove Lane, then heads northeast for approximately one-quarter of a mile (0.27 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). It then heads slightly northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 5 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.28 miles), crossing the SCRF a second time, to just west of the intersection of McGuirt Road and Dixon Drive, and continues northwest along Dixon Drive for approximately four-tenths of a mile (0.42 miles) and ends at a new intersection with Main Street (US 15). This railroad crossing is in a new location and would require construction of a new crossing. This alternative provides a connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 5 proposes six new stream crossings and replaces one stream crossing at Jordan Lane.

3.5.7 What is Alternative 6 (I in the South/T in the North (Preferred))?

Alternative 6 (**Figure 3-6f**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 5.16 miles long and begins at the intersection of Sumter Highway (US 15) and Browntown Road. From there, it heads southeast for approximately nine-tenths of a mile (0.94 miles) and intersects Dove Lane, then heads northeast for approximately one-quarter of a mile (0.27 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 6 then heads slightly northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 6 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.31 miles), crossing the SCRF a second time, to the intersection of McGuirt Road and Dixon Drive. This railroad crossing is in a new location and would require construction of a new crossing. From there, it heads northwest just north of Dixon Drive for four-tenths of a mile (0.40 miles) before intersecting Main Street (US 15). It then heads northeast for approximately four-tenths of a mile (0.37 miles) and connects with Bethune Highway (SC 341). This alternative provides a connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 6 proposes six new stream crossings and replaces one stream crossing at Jordan Lane.

3.5.8 What is Alternative 7 (N in the South/I in the North)?

Alternative 7 (**Figure 3-6g**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 5.37 miles and begins at the intersection of Sumter Highway (US 15) and Browntown Road. It then continues slightly northeast for approximately one mile (0.96 miles) and intersects St. Charles Road (SC 154). From there, it heads east for one-quarter of a mile where it crosses the SCRF. This proposed railroad crossing is in a new location and would likely require construction of a new grade-separated crossing due to the proximity of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 7 then heads slightly southeast for approximately one-half of a mile (0.49 miles) where it intersects Bradley Avenue, then continues southeast for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 7 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. From there, it continues northeast for approximately one mile (1.08 miles) where it follows McGuirt Road for approximately four-tenths of a mile (0.36 miles) and crosses the SCRF a second time. This railroad crossing would require modification of the existing at-grade crossing with McGuirt Road. It then heads northwest for approximately seven-tenths of a mile (0.68 miles), connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15), and follows Bethune Highway (SC 341) for approximately three-tenths of a mile (0.31 miles) before ending. Alternative 7 proposes four new stream crossings and replaces two stream crossings at Jordan Lane and McGuirt Road.

3.5.9 What is Alternative 8 (N in the South/T in the North)?

Alternative 8 (**Figure 3-6h**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 5.03 miles long and begins at the intersection of Sumter Highway (US 15) and Browntown Road. It then continues slightly northeast for approximately one mile (0.96 miles) and intersects St. Charles Road (SC 154). From there, it heads east for one-quarter of a mile where it crosses the SCRF. This proposed railroad crossing is in a new location and would likely require construction of a new grade-separated crossing due to the proximity of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 8 then heads slightly southeast for approximately one-half of a mile (0.49 miles) where it intersects Bradley Avenue, then continues southeast for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 8 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.31 miles), crossing the SCRF a second time, to the intersection of McGuirt Road and Dixon Drive. This railroad crossing is in a new location and would require construction of a new crossing. From there, it heads northwest just north of Dixon Drive for four-tenths of a mile (0.40 miles) before intersecting Main Street (US 15). It then heads northeast for approximately four-tenths of a mile (0.37 miles) and connects with Bethune Highway (SC 341). This alternative provides a connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 8 proposes five new stream crossings and replaces one stream crossing at Jordan Lane.

3.5.10 What is Alternative 9 (T in the South/I in the North)?

Alternative 9 (**Figure 3-6i**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 5.10 miles long and begins approximately one-tenth of a mile (0.08 miles) southwest of the intersection of Sumter Highway (US 15) and Wilkinson Road. From there, it heads southeast for approximately two-tenths of a mile (0.18

miles) and intersects Edgefield Drive, then continues southeast for approximately four-tenths of a mile (0.43 miles) where it intersects with Dove Lane. It then heads southeast for approximately three-tenths of a mile (0.27 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 9 then heads northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 9 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. From there, it continues northeast for approximately one mile (1.08 miles) where it follows McGuirt Road for approximately four-tenths of a mile (0.36 miles) and crosses the SCRF a second time. This railroad crossing would require modification of the existing at-grade crossing with McGuirt Road. It then heads northwest for approximately seven-tenths of a mile (0.68 miles), connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15), and follows Bethune Highway (SC 341) for approximately three-tenths of a mile (0.31 miles) before ending. Alternative 9 proposes three new stream crossings and replaces two stream crossings at Jordan Lane and McGuirt Road.

3.5.11 What is Alternative 10 (T in the South/N in the North)?

Alternative 10 (**Figure 3-6j**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 4.37 miles long and begins approximately one-tenth of a mile southwest (0.08 miles) of the intersection of Sumter Highway (US 15) and Wilkinson Road. From there, it heads southeast for approximately two-tenths of a mile (0.18 miles) and intersects Edgefield Drive, then continues southeast for approximately four-tenths of a mile (0.43 miles) where it intersects with Dove Lane. It then heads southeast for approximately three-tenths of a mile (0.27 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 10 then heads northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 10 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.28 miles), crossing the SCRF a second time, to just west of the intersection of McGuirt Road and Dixon Drive, and continues northwest along Dixon Drive for approximately four-tenths of a mile (0.42 miles) and ends at a new intersection with Main Street (US 15). This railroad crossing is in a new location and would require construction of a new crossing. This alternative provides a connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 10 proposes four new stream crossings and replaces one stream crossing at Jordan Lane.

3.5.12 What is Alternative 11 (T-Mod in the South/I in the North)?

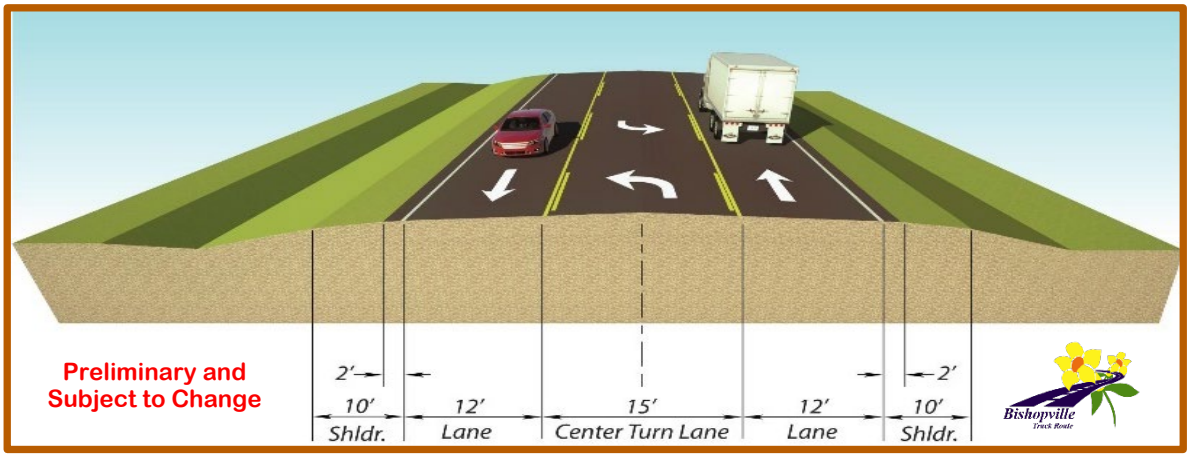
Alternative 11 (**Figure 3-6k**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 5.09 miles long and begins at the intersection of Sumter Highway (US 15) and Wilkinson Road. From there, it heads southeast along Wilkinson Road for approximately two-tenths of a mile (0.18 miles) and intersects Edgefield Drive, then continues southeast for four-tenths of a mile (0.40 miles) where it intersects Dove Lane. It then continues southeast for approximately three-tenths of a mile (0.26 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of

the existing at-grade crossing with St. Charles Road (SC 154). Alternative 11 then heads northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 11 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. From there, it continues northeast for approximately one mile (1.08 miles) where it follows McGuirt Road for approximately four-tenths of a mile (0.36 miles) and crosses the SCRF a second time. This railroad crossing would require modification of the existing at-grade crossing with McGuirt Road. It then heads northwest for approximately seven-tenths of a mile (0.68 miles), connects to Bethune Highway (SC 341) at the existing intersection with Main Street (US 15), and follows Bethune Highway (SC 341) for approximately three-tenths of a mile (0.31 miles) before ending. Alternative 11 proposes three new stream crossings and replaces two stream crossings at Jordan Lane and McGuirt Road.

3.5.13 What is Alternative 12 (T-Mod in the South/N in the North)?

Alternative 12 (**Figure 3-6l**) is a three-lane roadway with two 12-foot travel lanes and a 15-foot two-way left-turn lane (**Exhibit 3-9**). This alternative is approximately 4.35 miles long and begins at the intersection of Sumter Highway (US 15) and Wilkinson Road. From there, it heads southeast along Wilkinson Road for approximately two-tenths of a mile (0.18 miles) and intersects Edgefield Drive, then continues southeast for four-tenths of a mile (0.40 miles) where it intersects Dove Lane. It then continues southeast for approximately three-tenths of a mile (0.26 miles) where it intersects with the SCRF and St. Charles Road (SC 154). This proposed railroad crossing would require modification of the existing at-grade crossing with St. Charles Road (SC 154). Alternative 12 then heads northeast for approximately six-tenths of a mile (0.63 miles) where it intersects Bradley Avenue, then heads east for approximately one-half of a mile (0.46 miles) where it intersects English Mill Road. From there, it heads northeast for approximately four-tenths of a mile (0.44 miles) and intersects Wisacky Highway (SC 341). Alternative 12 continues northeast for approximately three-tenths of a mile (0.27 miles) where it intersects Jordan Lane. It then heads slightly northwest for approximately one and one-quarter miles (1.28 miles), crossing the SCRF a second time, to just west of the intersection of McGuirt Road and Dixon Drive, and continues northwest along Dixon Drive for approximately four-tenths of a mile (0.42 miles) and ends at a new intersection with Main Street (US 15). This railroad crossing is in a new location and would require construction of a new crossing. This alternative provides a connection from the new roadway to Cousar Street/Academy Road and permanently closes the portion of Dixon Drive between Academy Road and McGuirt Road. Alternative 12 proposes four new stream crossings and replaces one stream crossing at Jordan Lane.

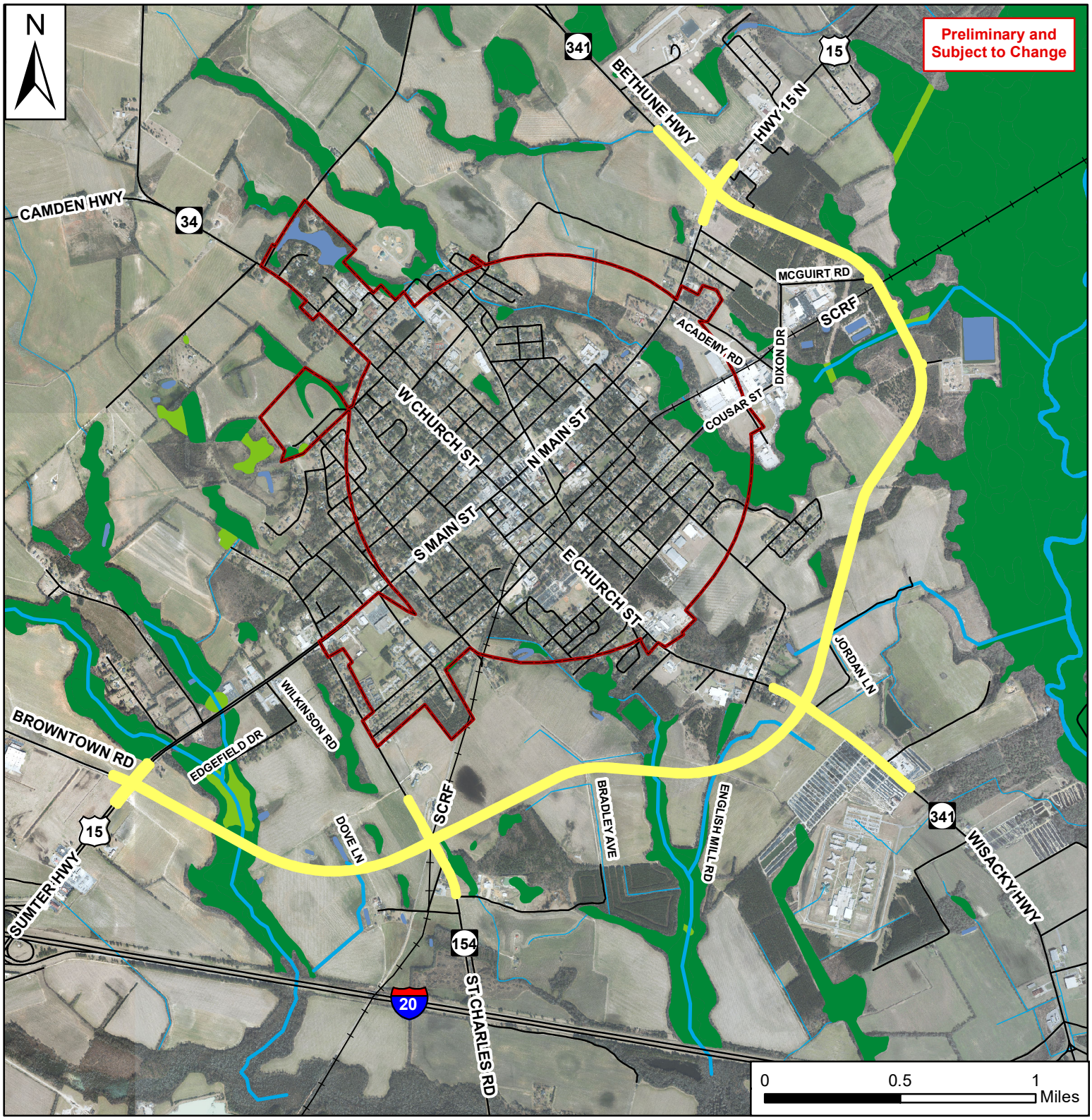
Exhibit 3-9. Proposed Typical Section



SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Rivers and Streams	Freshwater Emergent Wetland
Road	Freshwater Forested/Shrub Wetland
SCRF Railroad	Freshwater Pond
Alternative 1	Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

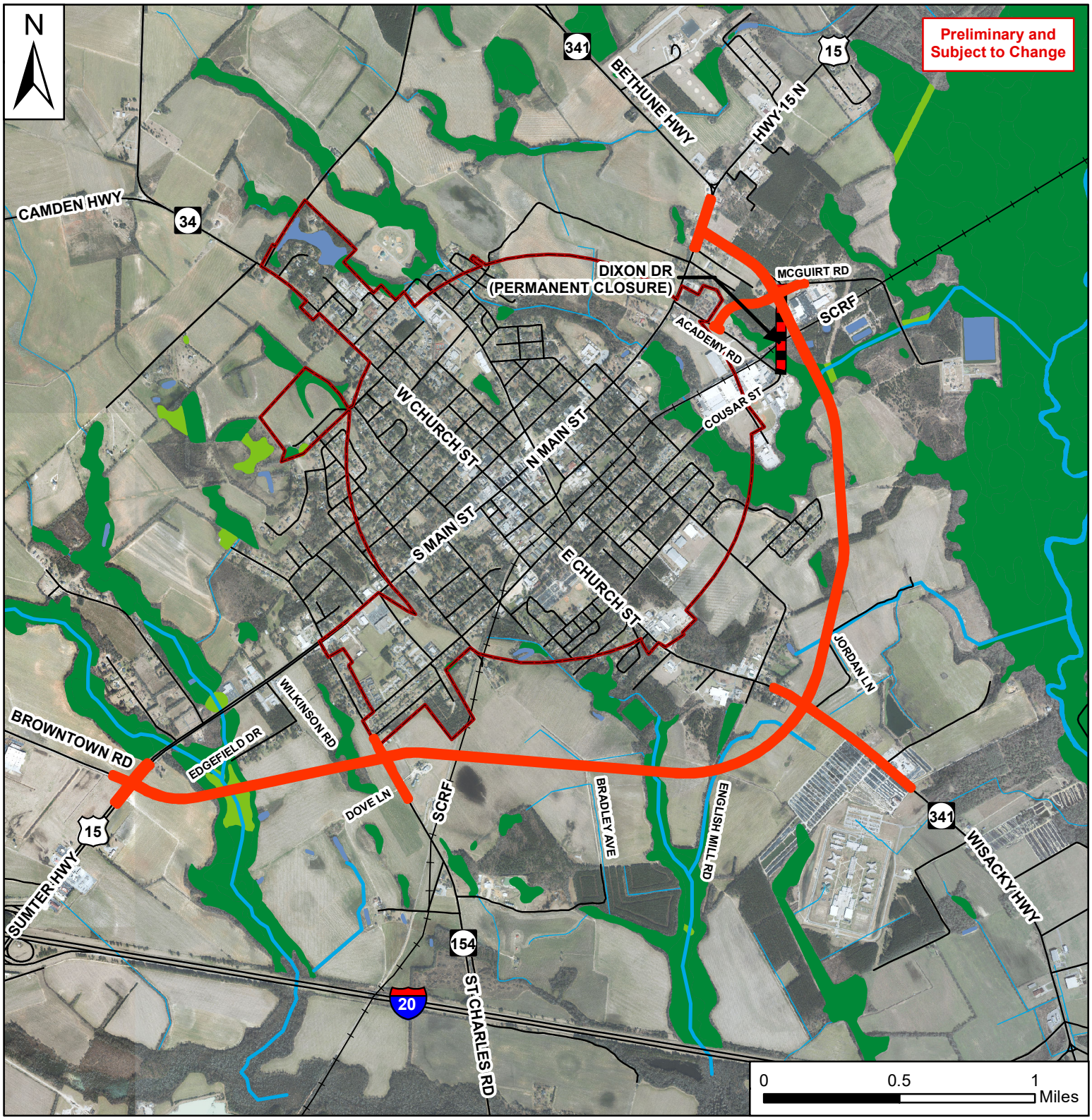
Alternative 1

Figure
3-6a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



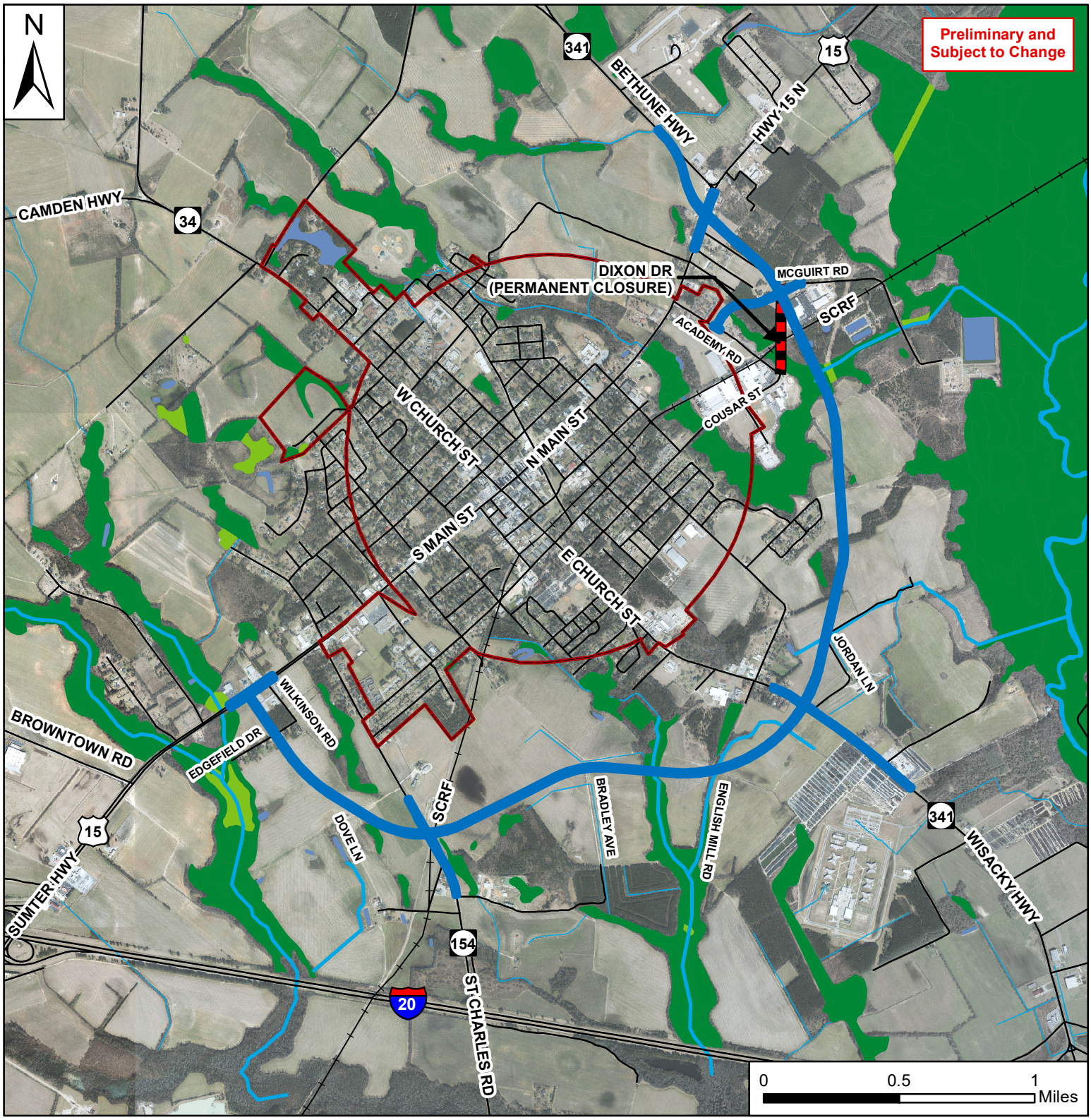
Permanent Road Closure
Rivers and Streams
Road
SCRF Railroad
Alternative 2
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 2

Figure
3-6b



Permanent Road Closure

Rivers and Streams

Road

SCRF Railroad

Alternative 3

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Municipal Boundary

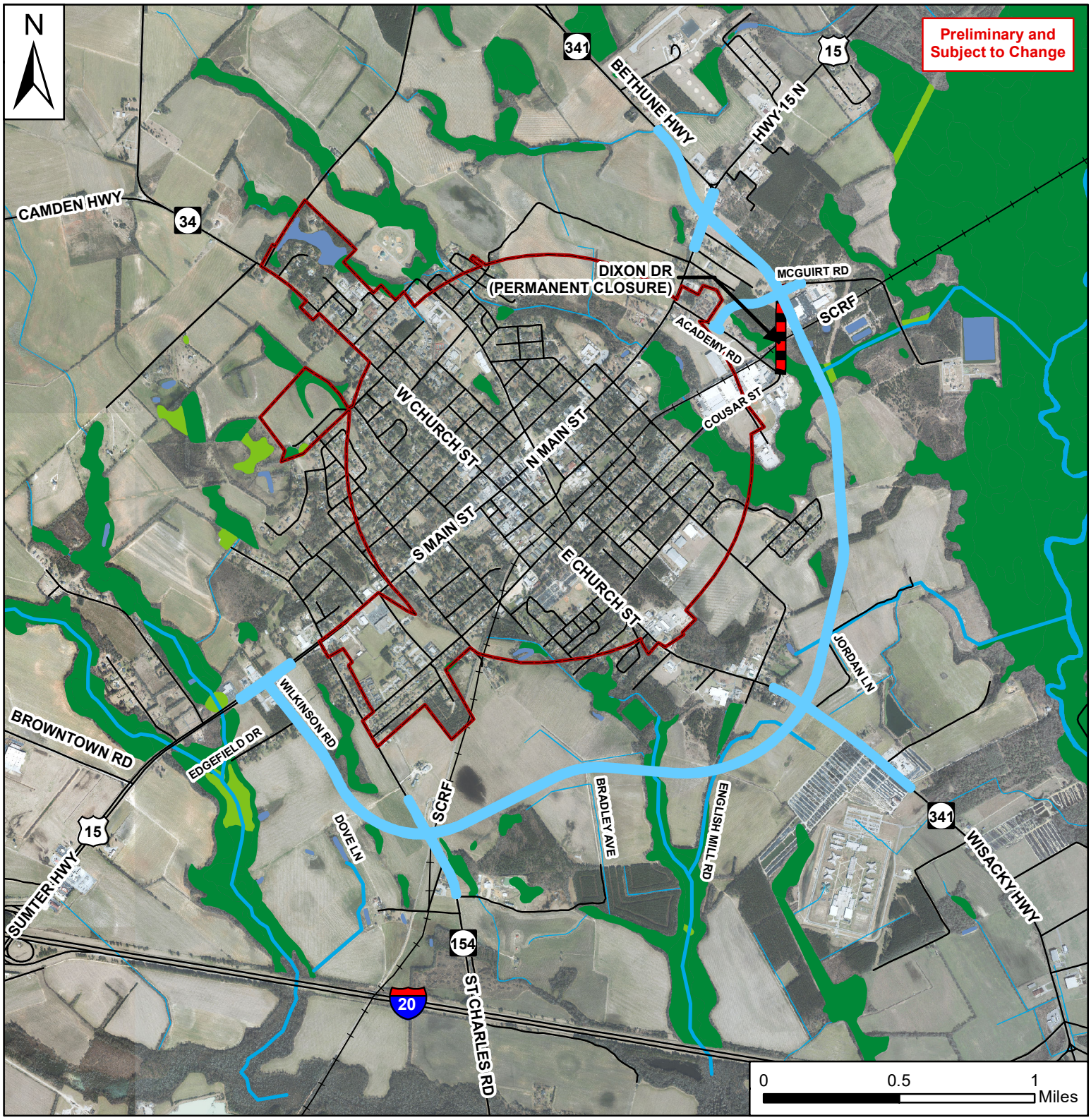
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 3

Figure

3-6c



Permanent Road Closure

Rivers and Streams

Road

SCRF Railroad

Alternative 4

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Municipal Boundary

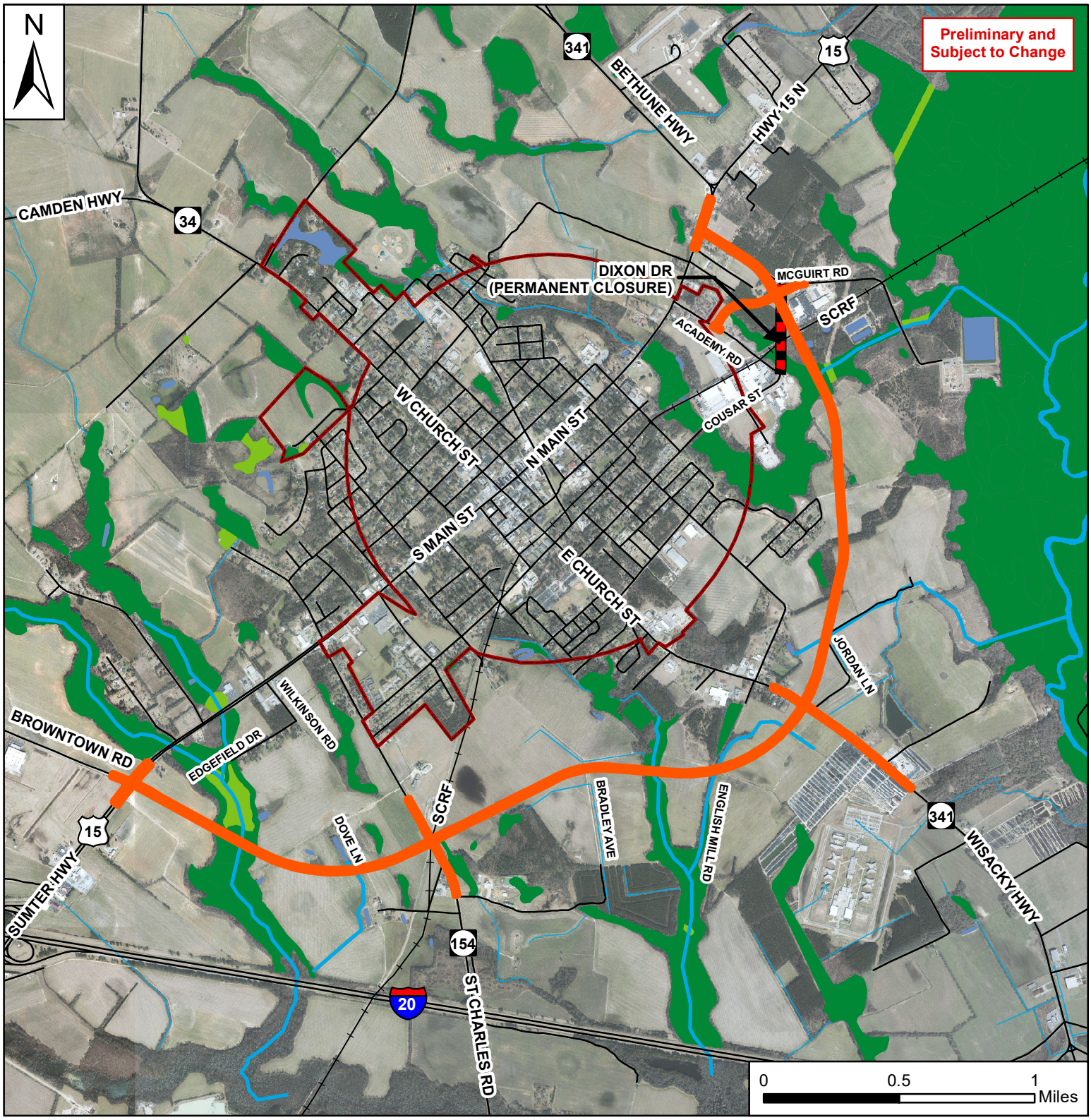
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 4

Figure

3-6d



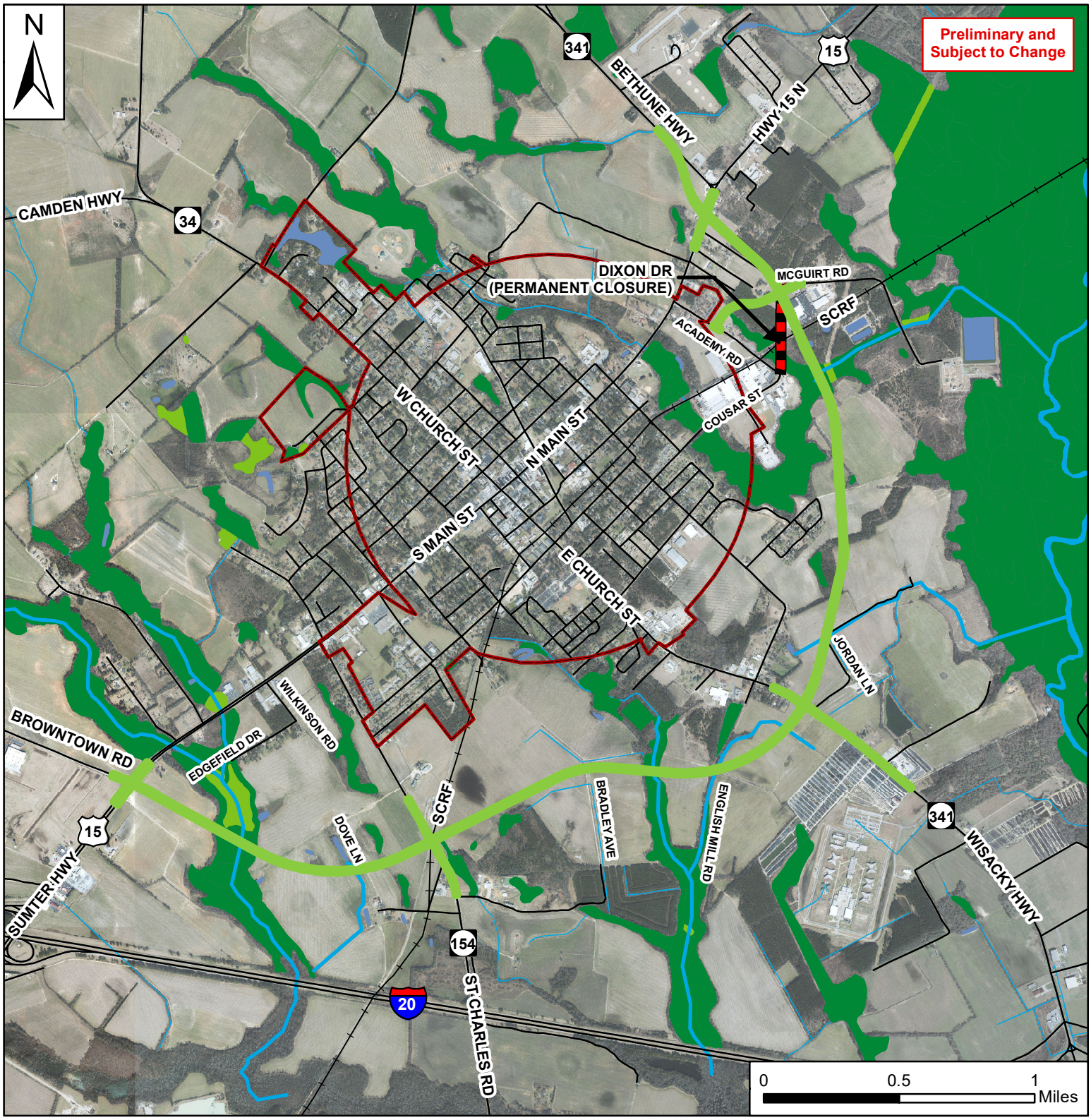
Permanent Road Closure
Rivers and Streams
Road
SCRF Railroad
Alternative 5
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 5

Figure
3-6e



Permanent Road Closure

Rivers and Streams

Road

SCRF Railroad

Alternative 6

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 6

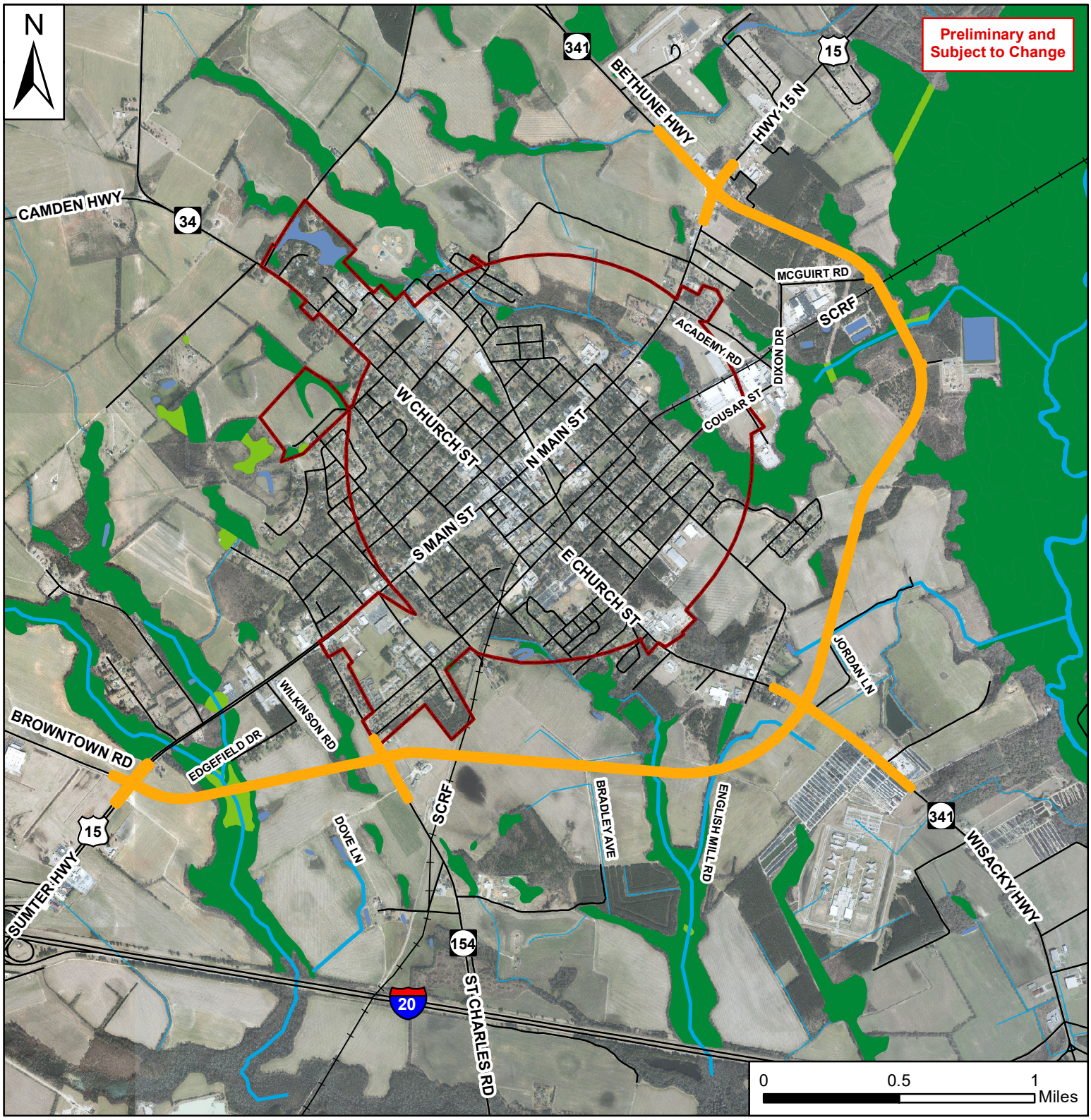
Figure

3-6f

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Rivers and Streams
Road
SCRF Railroad
Alternative 7
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

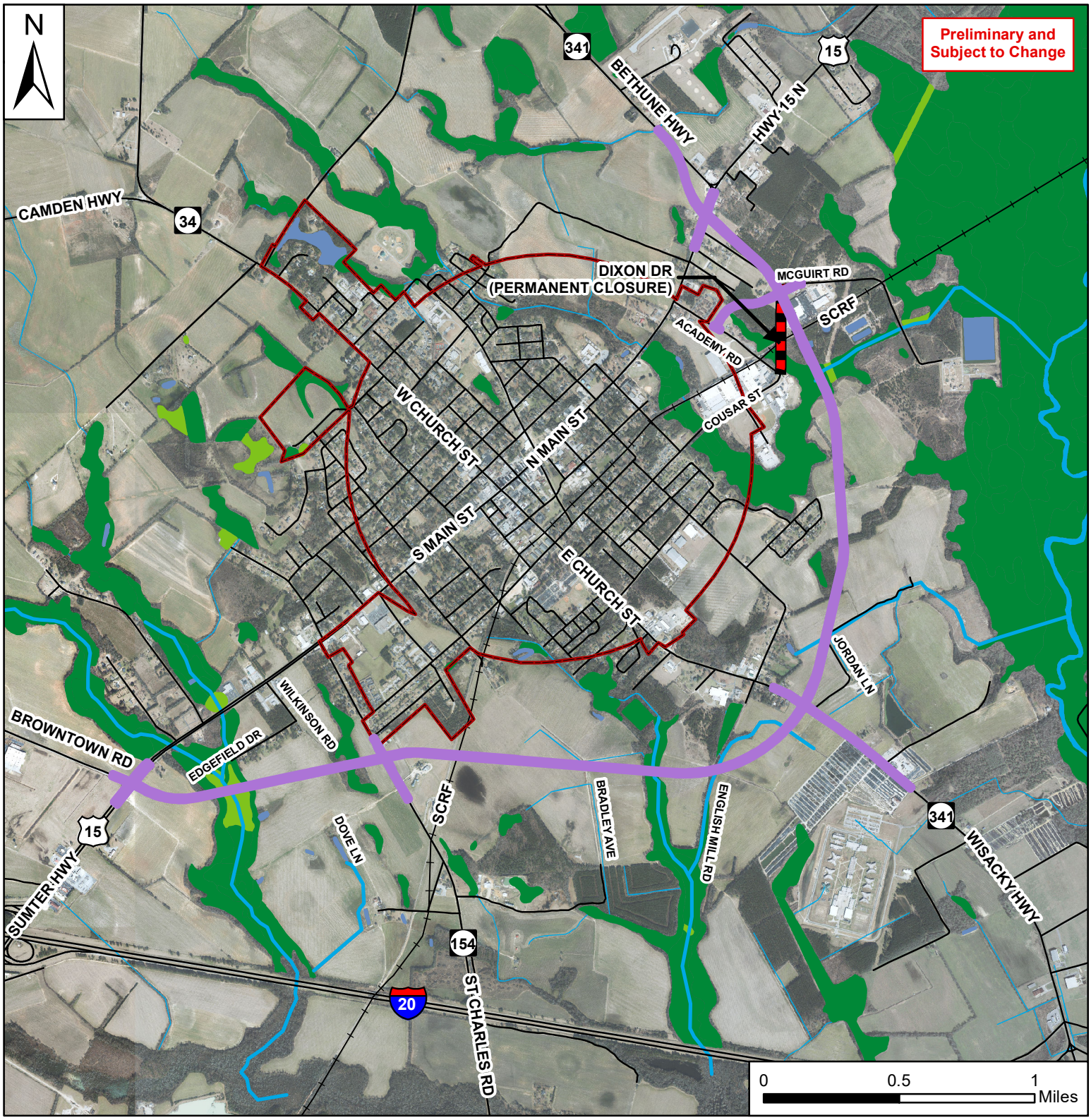
Alternative 7

Figure
3-6g

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



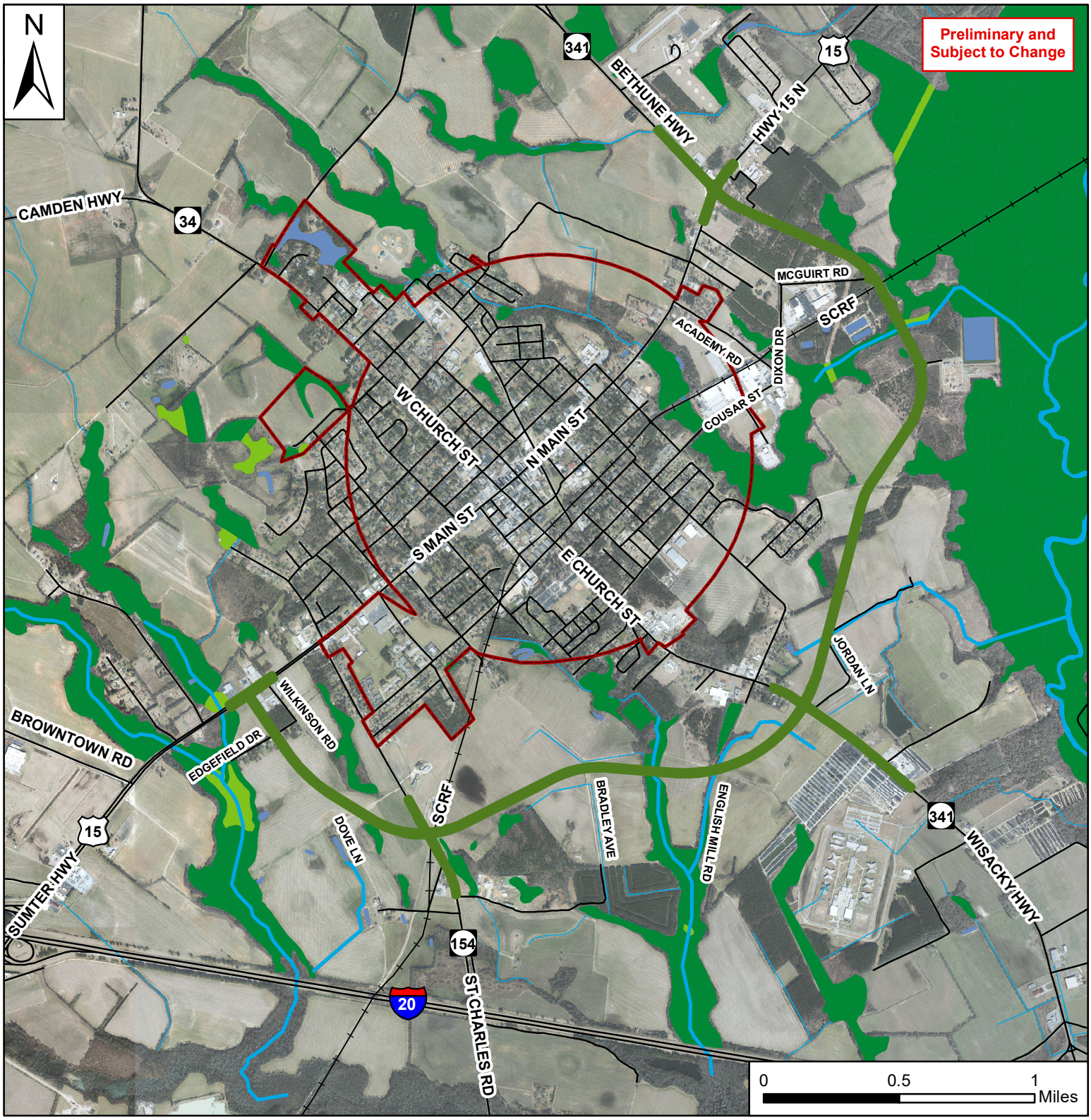
Permanent Road Closure
Rivers and Streams
Road
SCRF Railroad
Alternative 8
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 8

Figure
3-6h



Rivers and Streams	Freshwater Emergent Wetland
Road	Freshwater Forested/Shrub Wetland
SCRF Railroad	Freshwater Pond
Alternative 9	Municipal Boundary

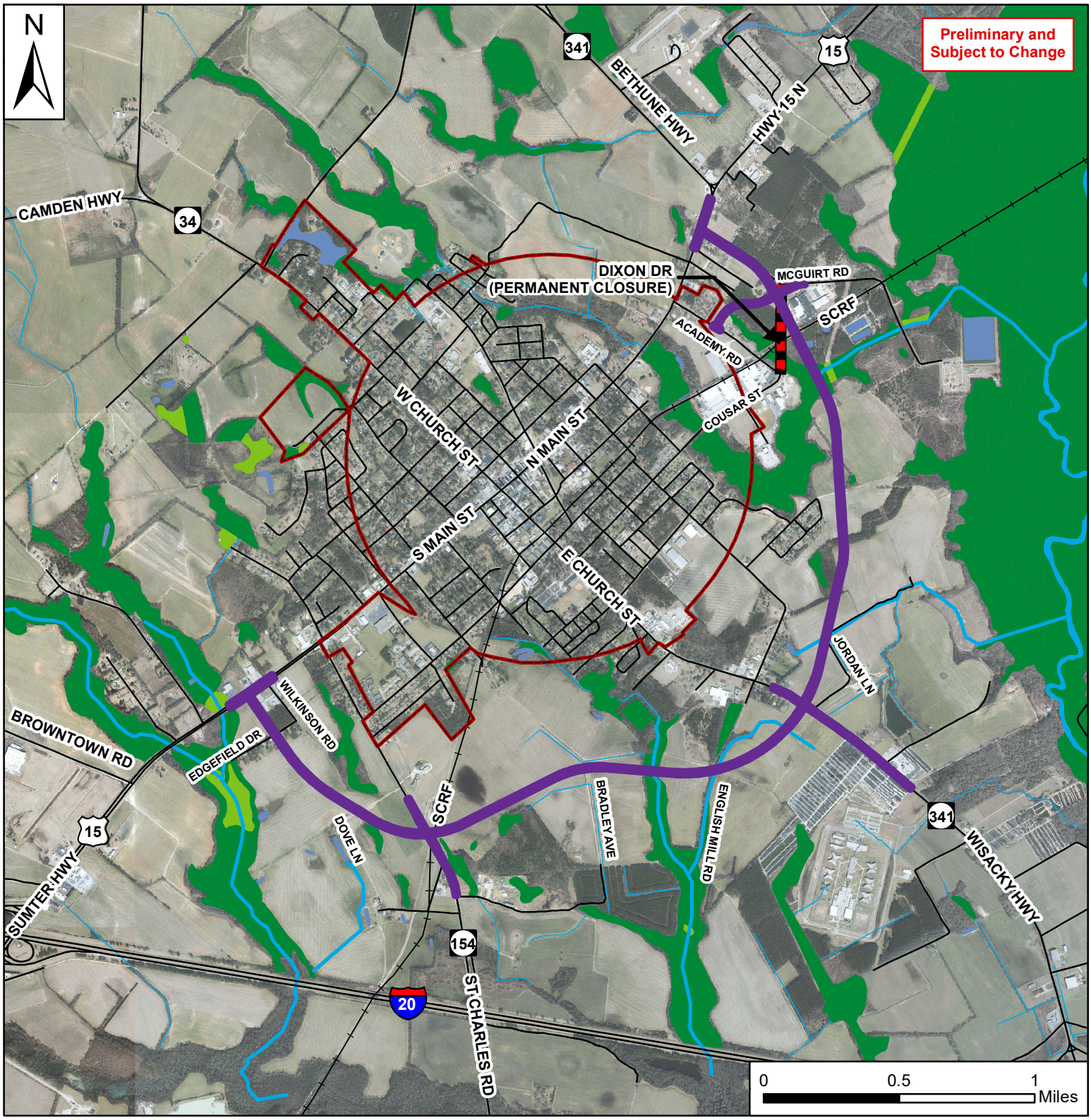
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 9

Figure

3-6i



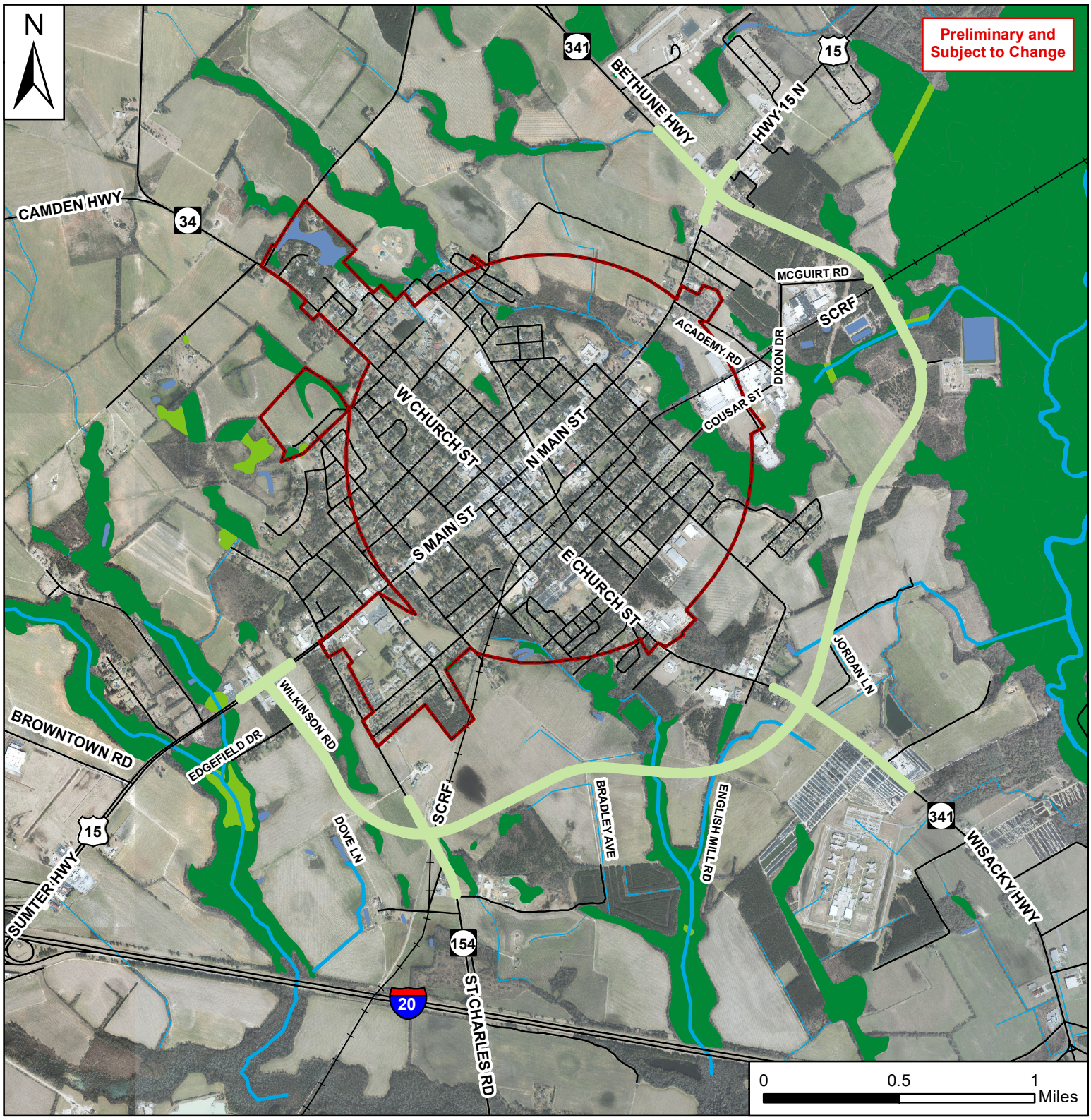
Permanent Road Closure
Rivers and Streams
Road
SCRF Railroad
Alternative 10
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 10

Figure
3-6j



Rivers and Streams

Road

SCRF Railroad

Alternative 11

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Municipal Boundary

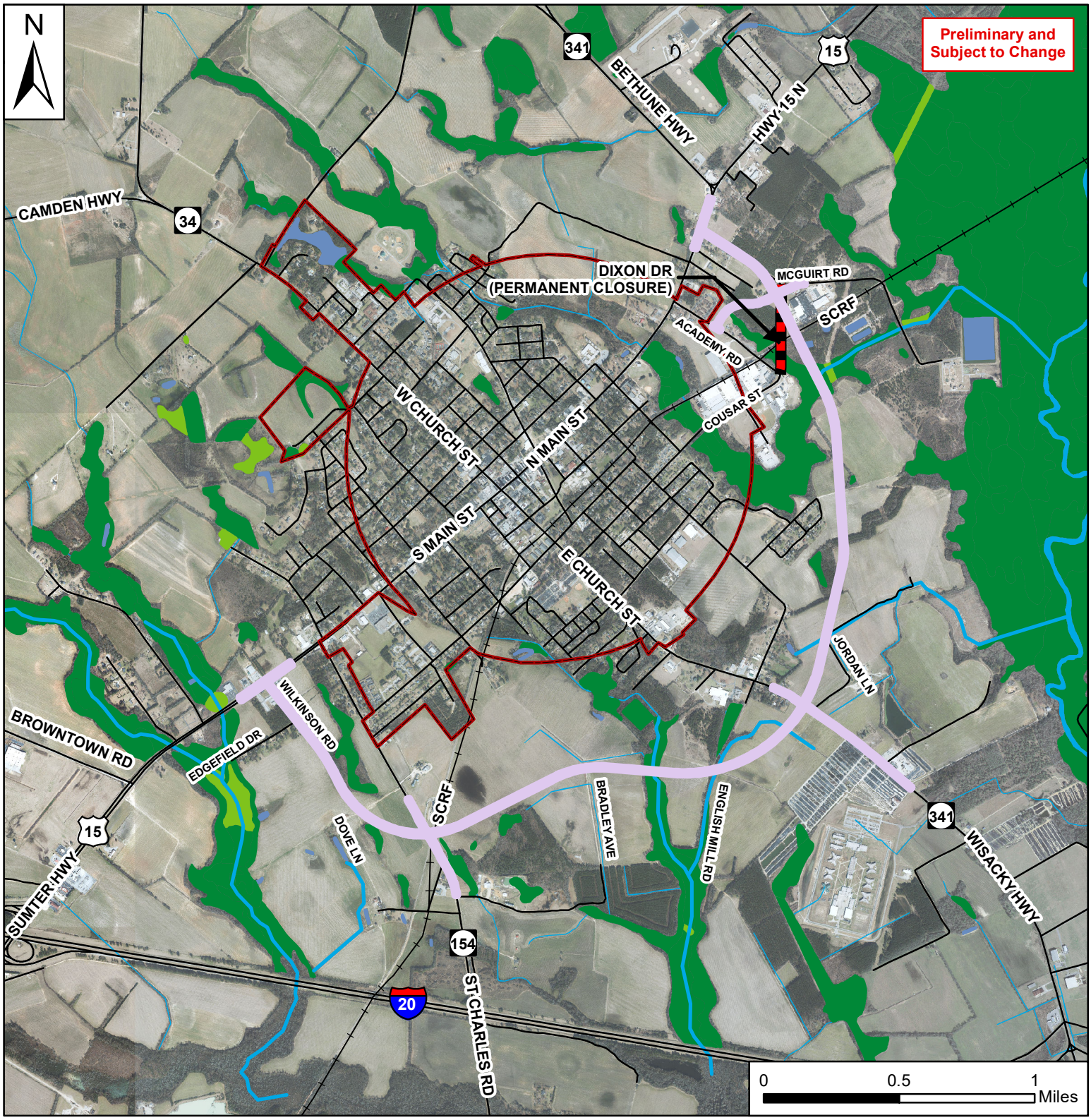
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 11

Figure

3-6k



Permanent Road Closure
Rivers and Streams
Road
SCRF Railroad
Alternative 12
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Alternative 12

Figure
3-6l

3.6 What is the Recommended Preferred Alternative?

In accordance with 40 CFR 1502.14(b) and (d), 12 reasonable alternatives were developed to a comparable level of detail for evaluation in this DEIS. A comprehensive alternative-screening of all 12 build alternatives was then conducted. After carefully considering and comparing how well the alternatives are anticipated to meet the project purpose and need and the potential impacts, Alternative 6 (**Figure 3-7** and **Section 3.5.7**) is being recommended as the Preferred Alternative for the Bishopville Truck Route Project.

3.6.1 What screening factors were used to assess the alternatives?

In addition to traffic screening factors—including the projected truck traffic downtown in 2045 (e.g., ability to meet the project purpose and need)—Alternatives 1-12 and the No-Build Alternative were analyzed using several environmental, social, and cost-related screening factors that are discussed in the following sections and shown in **Exhibit 3-10** and **Table 3-1**. **Chapter 4** provides detailed information on the anticipated effects of the project alternatives.

As illustrated in **Table 3-1**, all 12 build alternatives are expected to meet the primary project purpose of reducing truck traffic through downtown Bishopville in 2045, and all 12 build alternatives are expected to have similar impacts on the environment.

Exhibit 3-10. Preferred Alternative Screening Process

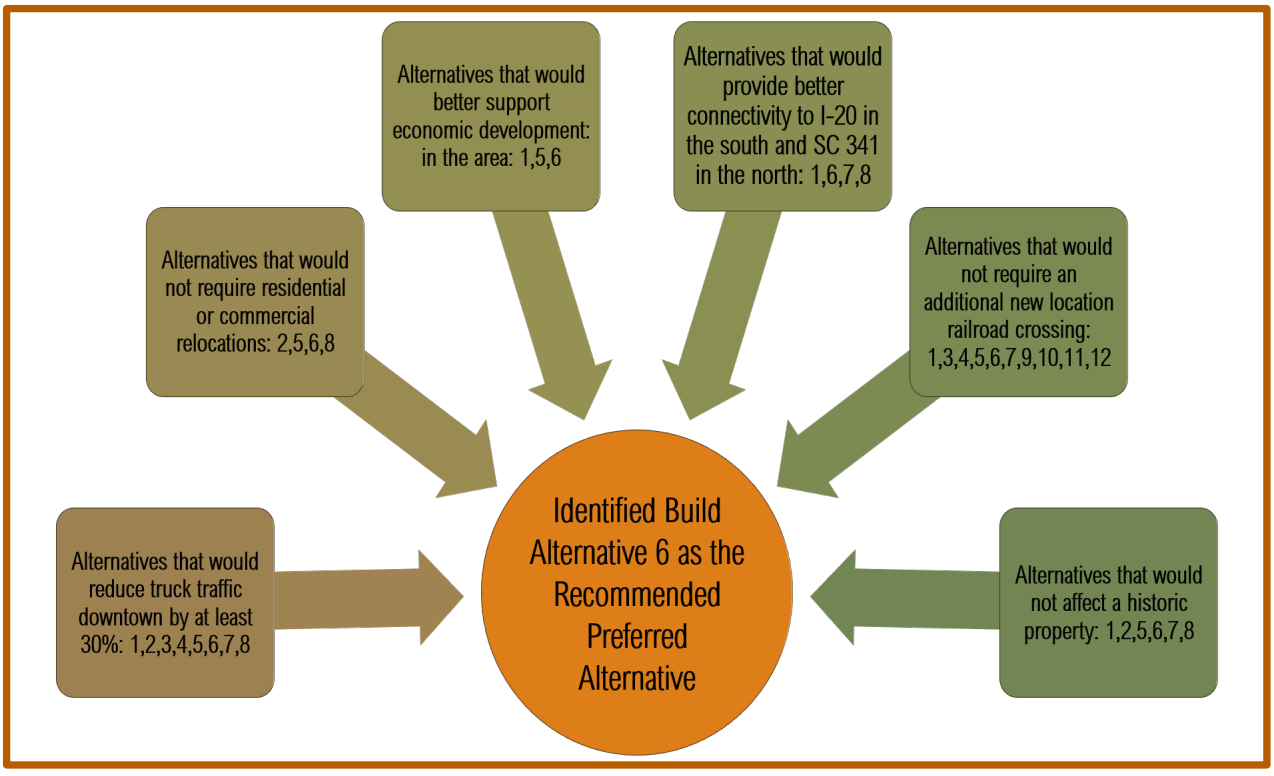


Table 3-1. Summary of Potential Impacts by Alternative

Potential Impacts	No-Build	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6 (PREFERRED)	Alternative 7	Alternative 8	Alternative 9	Alternative 10	Alternative 11	Alternative 12
Natural Resource-Related Screening Factors													
Streams (linear feet)	0	729	636	535	535	730	**732**	635	638	532	533	532	533
Wetlands (acres)	0.0	3.1	4.2	1.9	1.9	4.0	**4.0**	3.3	4.2	1.1	1.9	1.1	1.9
Ponds (acres)	0.0	0.0	0.1	0.3	0.3	0.1	**0.3**	0.0	0.3	0.0	0.1	0.0	0.1
Impaired Waters Crossed (#)	0	1	1	1	1	1	**1**	1	1	1	1	1	1
Floodplains (acres)	0.0	1.8	1.6	0.8	0.7	2.0	**2.0**	1.4	1.6	0.6	0.7	0.5	0.7
Threatened/Endangered Species (#)	0	0	0	0	0	0	**0**	0	0	0	0	0	0
Community-Related Screening Factors													
Residential Relocations (#)	0	1	0	3	3	0	**0**	1	0	4	3	4	3
Commercial Relocations (#)	0	3	0	0	1	0	**0**	3	0	3	0	4	1
Community Resources (#)	0	0	0	0	0	0	**0**	0	0	0	0	0	0
Section 4(f)/Section 6(f) Resources (#)	0	0	0	0	0	0	**0**	0	0	0	0	0	0
Cemeteries (#)	0	1	0	0	0	0	**0**	1	0	1	0	1	0
Cultural Resources (#)	0	0	0	1	1	0	**0**	0	0	1	1	1	1
Noise-Impacted Receivers (#)	2	0	0	0	0	0	**0**	0	0	0	0	0	0
Environmental Justice Populations Affected (Y/N)	Y	Y	Y	Y	Y	Y	**Y**	Y	Y	Y	Y	Y	Y
Land Use-Related Screening Factors													
Designated Agriculture Parcels Affected (#)	0	20	13	17	17	17	**20**	16	16	17	14	17	14
Designated Agricultural (acres)	0.0	46.7	31.7	34.9	34.8	41.8	**43.7**	36.6	35.5	37.9	33.0	37.9	33.0
Farmland of Statewide Importance (acres)	0.0	7.3	8.3	8.0	5.8	7.6	**8.0**	7.9	8.7	7.2	7.6	5.1	5.4
Prime Farmland (acres)	0.0	61.1	56.2	59.8	62.1	59.4	**63.0**	57.9	59.7	58.0	56.3	60.3	58.6
Hazardous Sites (#)	0	4	4	5	5	4	**5**	4	5	4	4	4	4
Additional New Location Railroad Crossings (#)	0	0	1	0	0	0	**0**	0	1	0	0	0	0
Utilities Crossed (#)	0	41	46	44	47	46	**45**	41	45	48	45	51	48
Traffic-Related Screening Factors													
Estimated Average Daily Trucks on Main Street in 2045 (#)	3,200	2,200	2,100	2,200	2,200	2,200	**1,900**	2,200	1,900	2,400	2,400	2,400	2,400
Estimated Average Peak Period (AM and PM) Travel Time in 2045 (minutes)	11:18	6:58	6:56	6:52	6:52	7:00	**6:33**	6:56	6:33	7:09	7:09	7:09	7:09
US 15/I-20 <-> US 15/Bethune Highway (minutes)	11:22	7:00	7:00	7:00	7:00	7:07	**6:45**	7:00	6:45	7:00	7:07	7:00	7:07
US 15/Bethune Highway <-> SC 341 north of I-20 (minutes)	11:15	8:15	8:22	8:00	8:00	8:22	**8:00**	8:15	8:00	8:15	8:22	8:15	8:22
US 15/Bethune Highway <-> US 15 north of I-20 via Alternative (minutes)	-	7:07	6:37	7:30	7:30	6:45	**6:30**	7:00	6:30	7:52	7:22	7:52	7:22
US 15/Bethune Highway <-> SC 341 north of I-20 via Alternative (minutes)	-	5:30	5:45	5:00	5:00	5:45	**5:00**	5:30	5:00	5:30	5:45	5:30	5:45
Intersections with Poor Level of Service in 2045 (#)	2	0	0	0	0	0	**0**	0	0	0	0	0	0
Proposed US 15 Intersection Modifications (#)	2	2	3	3	3	3	**2**	2	2	3	4	3	4
Cost-Related Screening Factors													
Approximate Length (miles)	0.0	5.5	4.6	4.8	4.8	4.8	**5.2**	5.4	5.0	5.1	4.4	5.1	4.4
Approximate Right-of-Way (acres)	0.0	78.9	71.1	73.3	73.4	74.0	**78.1**	76.0	75.2	74.1	69.2	74.2	69.3
Estimated Total Cost ($)	$0	$22,430,000	$23,150,000	$19,007,000	$18,937,000	$23,610,000	**$22,577,000**	$21,720,000	$21,617,000	$19,360,000	$17,540,000	$19,040,000	$19,720,000
Estimated Right-of-Way Cost ($)	$0	$1,680,000	$1,400,000	$1,757,000	$1,687,000	$1,610,000	**$1,827,000**	$1,470,000	$1,617,000	$1,610,000	$1,540,000	$1,540,000	$1,470,000
Estimated Construction Cost ($)	$0	$20,750,000	$21,750,000	$17,250,000	$17,250,000	$22,000,000	**$20,750,000**	$20,250,000	$20,000,000	$17,750,000	$16,000,000	$17,500,000	$18,250,000

Note: Potential impact estimates for all build alternatives were calculated based on the proposed footprint plus a 25-foot buffer and are subject to change.

3.6.1.1 Downtown Truck Traffic

The project's primary purpose is to address existing and future truck traffic through downtown Bishopville. Therefore, the project alternatives were evaluated on how well they were anticipated to reduce traffic through downtown. As detailed in the *Bishopville Truck Route Project Traffic Analysis Study*, when compared to the No-Build Alternative, Alternatives 1-8 are projected to reduce 2045 downtown truck volumes by 1,000 to 1,300 trucks (30-41%), with Alternatives 6 and 8 reducing truck traffic the most (1,300 trucks or 41%). Alternatives 9-12 are projected to reduce 2045 downtown truck volumes the least (800 trucks or 25%).

Therefore, although Alternatives 9-12 would have less impact on some natural resources (e.g., streams, wetlands, and farmland) than some of the other build alternatives, Alternatives 9-12 are not being recommended as the Preferred Alternative because:

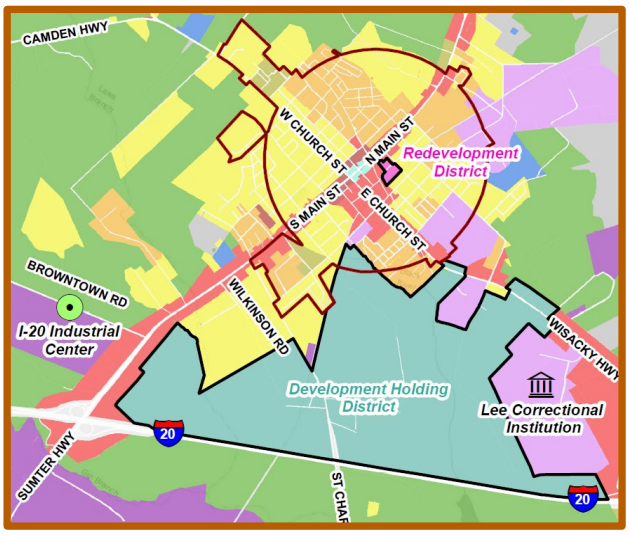
- All other build alternatives would reduce future truck traffic downtown more in 2045;
- Alternative 9 would require seven relocations (four residential and three commercial);
- Alternative 10 would require three relocations (three residential);
- Alternative 11 would require eight relocations (four residential and four commercial);
- Alternative 12 would require four relocations (three residential and one commercial);
- Other build alternatives have greater potential to support economic development in the area;
- Other build alternatives would provide better connectivity to Sumter Highway (US 15) north of I-20 in the south and Bethune Highway (SC 341) in the north.

3.6.1.2 Other Performance Measures

While all 12 build alternatives are expected to reduce truck traffic, there are qualitative and quantitative differences. Therefore, in addition to their ability to meet the primary project purpose of reducing truck traffic on Main Street in 2045, Alternatives 1-8 were analyzed using the following performance measures (**Table 3-2**):

- Ability to support transportation infrastructure needed for economic growth and to support local development initiatives; and
- Connectivity to Sumter Highway (US 15) north of I-20 in the south and Bethune Highway (SC 341) in the north.

Exhibit 3-11. Future Land Use



Alternatives 1-8 were evaluated on how well they would meet the secondary project purpose, which is to enhance economic development in the area. All build alternatives could support the transportation infrastructure needed for economic growth and development to a degree. However, Alternatives 1, 5, and 6 are expected to better support economic development initiatives because they are located further south in the proposed Development Holding District (**Exhibit 3-11** and **Figure 4.1-2**) where future growth initiatives are focused. Alternatives 1-8 were also evaluated on their connectivity to Sumter Highway (US 15) in the south, connectivity to Bethune Highway (SC 341) in the north, and connectivity to the existing industrial park off US 15. The western termini of Alternatives 3 and 4 are located farther away from I-20 than the western termini of Alternatives 1, 2, 5, 6, 7, and 8; and Alternatives 2 and 5 do not connect to Bethune Highway (SC 341) in the north.

Table 3-2. Evaluation of Performance Measures by Alternative

Alternative	Meets Project Purposes	Future (2045) Truck Reduction Downtown	Best Potential to Support Economic Development Initiatives	Best Connectivity to US 15 in the South and SC 341 in the North
No-Build	✗	0%	✗	✗
Alternative 1	✓	-30%	✓	✓
Alternative 2	✓	-34%	✗	✗
Alternative 3	✓	-30%	✗	✗
Alternative 4	✓	-30%	✗	✗
Alternative 5	✓	-30%	✓	✗
Alternative 6 (PA)	✓	-41%	✓	✓
Alternative 7	✓	-30%	✗	✓
Alternative 8	✓	-41%	✗	✓
Alternative 9	✓	-25%	✗	✗
Alternative 10	✓	-25%	✗	✗
Alternative 11	✓	-25%	✗	✗
Alternative 12	✓	-25%	✗	✗

3.6.1.3 Impacts on the Human Environment

Bishopville's rural setting and community cohesion were important considerations in identifying a preferred alternative. Alternatives 1, 2, 5, 6, 7, and 8 do not have the potential to affect a historic property. None of the build alternatives are estimated to result in more than eight relocations. However, Alternatives 2, 5, 6, and 8 would not result in any relocations. Alternatives 2 and 8 would require an additional new location railroad crossing and are located closer to residential areas than Alternatives 5 and 6. Alternative 5 is anticipated to reduce future truck traffic downtown by 1,000 trucks (30%) and cost approximately $23,610,000; whereas Alternative 6 is anticipated to reduce future truck traffic by 1,300 trucks (41%) and cost approximately $22,577,000.

3.6.1.4 Impacts on the Natural Environment

In general, the wetlands in the project study area include forested and emergent wetlands historically modified by human disturbance and land-use practices including draining, clearing, and channelization of natural drainage. All wetlands in the project study area are Category 4 wetlands because they have been affected by human disturbances. The potential impacts on wetlands range from 1.1 acres to 4.2 acres, with an average impact of 2.7 acres. The potential impacts on streams range from 532 linear feet to 732 linear feet, with an average impact of 608 linear feet. The potential impacts on floodplains range from 0.5 acres to 2.0 acres, with an average impact of 1.2 acres. The potential impacts on streams range from 532 linear feet to 732 linear feet, with an average impact of 608 linear feet. The potential impacts on ponds range from 0.0 acres to 0.3 acres, with an average impact of 0.1 acres.

3.6.1.5 Identifying a Preferred Alternative

After carefully considering and comparing the potential adverse impacts of the alternatives and how well the alternatives are anticipated to meet the project purpose and need, Alternative 6 is being recommended as the Preferred Alternative, subject to public and agency review, because it:

- Best meets the primary purpose of the project of reducing truck traffic downtown;
- Best meets the secondary purpose of the project of supporting economic development;
- Provides better connectivity to I-20 and SC 341;
- Would not affect a historic property;
- Would not require any residential or commercial relocations;
- Would not require an additional new location railroad crossing; and
- Would not have significantly higher impacts on natural resources than other alternatives.

The Preferred Alternative (shown in **Exhibit 3-12** and **Figure 3-7**) would be approximately 5.2 miles in length, require about 78.1 acres of right-of-way, cost an estimated $22.6 million to construct; and would consist of two 12-foot travel lanes and a 15-foot two-way left-turn lane. SCDOT will coordinate with local officials regarding the enforcement of no through truck traffic on Main Street (US 15). The potential direct impacts of the Preferred Alternative are summarized in **Table 3-3**.

The final identification of the Preferred Alternative will not occur until after issuance of the DEIS, a 45-day comment period, and a public hearing that will give the public an opportunity to discuss the project with SCDOT. One important consideration moving forward is the comments and feedback received on the DEIS and Preferred Alternative. Another important consideration is the project will require a Section 404(b)(1) Permit under the *Clean Water Act of 1972,* as amended.

Exhibit 3-12. Recommended Preferred Alternative

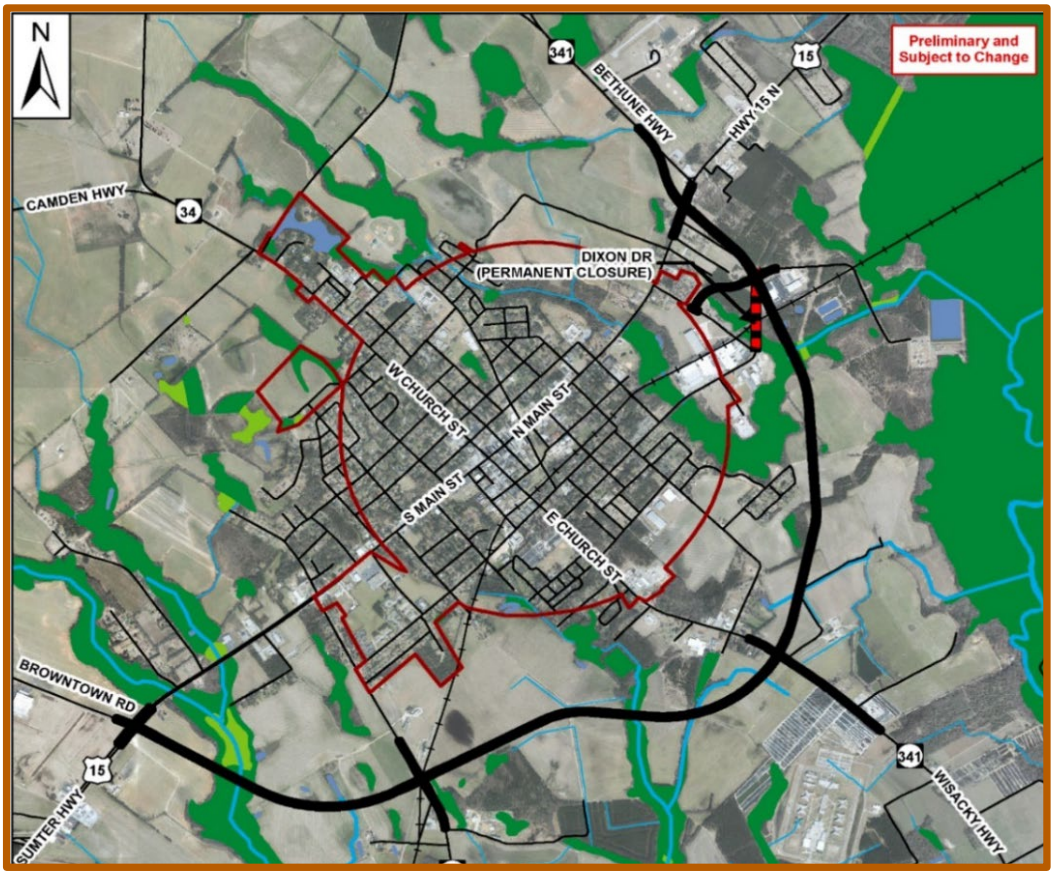


Table 3-3. Preferred Alternative (Alternative 6) Potential Direct Impacts

Potential Impacts	Preferred Alternative (Alternative 6)
Natural Resource-Related Screening Factors	
Streams (linear feet)	732
Wetlands (acres)	4.0
Ponds (acres)	0.3
Impaired Waters Crossed (#)	1
Floodplains (acres)	2.0
Threatened/Endangered Species (#)	0
Community-Related Screening Factors	
Residential Relocations (#)	0
Commercial Relocations (#)	0
Community Resources (#)	0
Section 4(f)/Section 6(f) Resources (#)	0
Cemeteries (#)	0
Cultural Resources (#)	0
Noise-Impacted Receivers (#)	0
Environmental Justice Populations Affected (Y/N)	Y
Land Use-Related Screening Factors	
Designated Agriculture Parcels Affected (#)	20
Designated Agricultural (acres)	43.7
Farmland of Statewide Importance (acres)	8.0
Prime Farmland (acres)	63.0
Hazardous Sites (#)	5
Additional New Location Railroad Crossings (#)	0
Utilities Crossed (#)	45
Traffic-Related Screening Factors	
Estimated Average Daily Trucks on Main Street in 2045 (#)	1,900
Estimated Average Peak Period (AM and PM) Travel Time in 2045 (minutes)	6:33
Intersections with Poor Level of Service in 2045 (#)	0
Proposed US 15 Intersection Modifications (#)	2
Cost-Related Screening Factors	
Approximate Length (miles)	5.2
Approximate Right-of-Way (acres)	78.1
Estimated Total Cost ($)	$22,577,000

Note: Potential impact estimates for the Preferred Alternative were calculated based on the proposed footprint plus a 25-foot buffer and are subject to change.

3.6.2 Why are the *Clean Water Act Section 404(b)(1) Guidelines* important?

Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into waters of the United States (WOTUS).[4] Activities regulated under this program include fill for infrastructure development such as highways and airports. WOTUS (also called jurisdictional waters) include many wetlands, streams, lakes, and rivers, as well as oceans.

The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment or (2) the nation's waters would be significantly degraded. The Environmental Protection Agency (EPA), in conjunction with USACE, developed "Guidelines" to ensure compliance with Section 404. The *Section 404(b)(1) Guidelines of the Clean Water Act of 1972,* as amended, prohibit the discharge of dredged or fill materials into WOTUS, except when authorized by a permit issued by the USACE.

3.6.2.1 Section 404(b)(1) Permit Conditions

In its evaluation of permit applications, the USACE is required to analyze alternatives for the proposed project that achieve its purpose. The USACE conducts this analysis pursuant to two main requirements: the *Section 404(b)(1) Guidelines* and *NEPA.* USACE must evaluate alternatives that are "practicable" and "reasonable." It is important to note that while the terms practicable and reasonable are used and may be synonymous at times, the factors to determine practicability for the Guidelines and reasonability for *NEPA* can and typically do differ. Practicable is defined as meaning the alternative is available, and capable of being done after taking into consideration cost, existing technology, and/or logistics in light of the overall project purpose(s). Reasonable is based on consideration of the project purpose as well as technology, economics, and common sense.

The USACE also considers alternatives as part of its public interest review evaluation, which includes a broad consideration of impacts and benefits. When applying for a permit, the applicant must show that steps have been taken to avoid impacts on WOTUS; that potential impacts have been minimized; and that compensation will be provided for all remaining unavoidable impacts.

When issuing permits under Section 404, the USACE must comply with the *Section 404(b)(1) Guidelines*. The *404(b)1 Guidelines* outline four conditions that must be satisfied to determine that a proposed discharge complies with the guidelines. These conditions are referred to as "restrictions on discharge." In general, these "restrictions" do not allow USACE to issue a permit if a discharge would:

1. Have a "practicable" alternative that would have a less adverse impact on the aquatic ecosystem if the alternative does not have other significant adverse environmental consequences. The USACE may only issue a permit for the "Least Environmentally Damaging Practicable Alternative (LEDPA)." The "overall" project purpose is used to determine whether "practicable" alternatives exist;
2. Cause or contribute to violations of applicable State water quality standard; violate toxic effluent standards; jeopardize the continued existence of an endangered or threatened species; or violate any marine sanctuary;
3. Cause or contribute to significant degradation of the WOTUS; and
4. Not have taken appropriate and practicable steps to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

[4] Section 404 of the *Clean Water Act*: https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404.

3.6.2.2 Practicability

Practicable alternatives are those that are available and capable of being done by the applicant after considering the following (in light of the project purpose). An alternative needs to fail only one practicability factor to be eliminated during the screening process:

- Costs – Cost is analyzed in the context of the overall scope/cost of the project and whether it is unreasonably expensive.
- Existing Technology – The alternatives should consider the limitations of existing technology yet incorporate the most efficient/least-impacting construction methods currently available.
- Logistics – The alternatives may incorporate an examination of various project logistics (e.g., placement of facilities, use of existing storage or staging areas, and/or safety concerns).

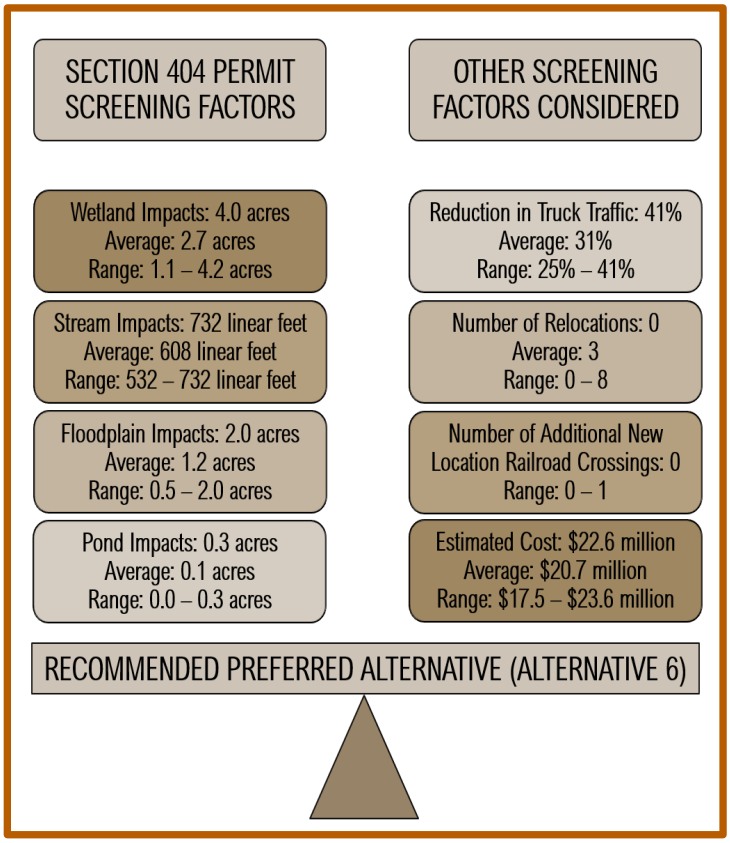
3.6.2.3 Availability

The Guidelines state that if it is otherwise a practicable alternative, an area not presently owned by the applicant that could reasonably be obtained, utilized, expanded, or managed to fulfill the overall purpose of the proposed activity can still be considered a practicable alternative (e.g., not owning the property does not preclude that parcel from being considered a practicable alternative).

3.6.2.4 Identifying a Preferred Alternative

Section 404(b)1 conditions were considered since they must be satisfied to obtain a Section 404(b)(1) permit. Since all build alternatives would have impacts on WOTUS (with minimal variability of impacts), SCDOT analyzed Alternatives 1-12 using USACE practicability factors before recommending Alternative 6 as the Preferred Alternative (**Table 3-4**).

Exhibit 3-13. Balancing Preferred Alternative Impacts



In summary, SCDOT identified Alternative 6 as the Preferred Alternative based on the following key screening factors:

- Alternatives 1, 3, 4, 7, 9, 10, 11, and 12 were eliminated from consideration because they would result in residential and/or commercial relocations;
- Alternatives 2 and 8 were eliminated from consideration because their design would require additional new location railroad crossings.
- Alternative 5 was eliminated from consideration due to having a less favorable cost/benefit ratio when compared to Alternative 6.

Many screening factors, including the Section 404(b)(1) permit requirements, were carefully analyzed before identifying Alternative 6 as the Preferred Alternative (**Exhibit 3-13**). This analysis, which balances the adverse and beneficial effects of the proposed project, should support the USACE Section 404(b)(1) permit decision.

Table 3-4. Section 404(b)(1) Alternative-Screening Matrix

Practicability Category[5]	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6 (Preferred)	Alternative 7	Alternative 8	Alternative 9	Alternative 10	Alternative 11	Alternative 12
Availability												
Available for Acquisition (YES if SCDOT has condemnation authority)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Logistics												
Sufficient Parcel Size (YES if the alternative would NOT require relocations)	NO (four potential relocations)	YES	NO (three potential relocations)	NO (four potential relocations)	YES	YES	NO (four potential relocations)	YES	NO (seven potential relocations)	NO (three potential relocations)	NO (eight potential relocations)	NO (four potential relocations)
Residential Relocations (#)	1	0	3	3	0	0	1	0	4	3	4	3
Commercial Relocations (#)	3	0	0	1	0	0	3	0	3	0	4	1
Avoids Impacts on Waters of the United States (WOTUS) (YES if the alternative would NOT impact WOTUS)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Stream Impacts (linear feet)	729	636	535	535	730	732	635	638	532	533	532	533
Wetland Impacts (acres)	3.1	4.2	1.9	1.9	4.0	4.0	3.3	4.2	1.1	1.9	1.1	1.9
Pond Impacts (acres)	0.0	0.1	0.3	0.3	0.1	0.3	0.0	0.3	0.0	0.1	0.0	0.1
Floodplain Impacts (acres)	1.8	1.6	0.8	0.7	2.0	2.0	1.4	1.6	0.6	0.7	0.5	0.7
Existing Zoning Appropriate and Potential for Change (YES if appropriately zoned or the zoning can be changed)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Availability of Utilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Availability for Access (YES if the alternative would NOT require an additional railroad crossing)	YES	NO (one additional new crossing)	YES	YES	YES	YES	YES	NO (one additional new crossing)	YES	YES	YES	YES
Additional New Location Railroad Crossings (#)	0	1	0	0	0	0	1	1	0	0	0	0
Availability for Access (YES if in the development area where growth initiatives are focused)	YES	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO
Existing Technology												
Topography and Other Site Conditions Feasible for Construction (YES if the alternative is feasible)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Cost												
Reasonable Acquisition Costs (YES if the costs are non-exorbitant)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Estimated Total Cost ($)	$22,430,000	$23,150,000	$19,007,000	$18,937,000	$23,610,000	$22,577,000	$21,720,000	$21,617,000	$19,360,000	$17,540,000	$19,040,000	$19,720,000
Favorable Cost-Benefit (C/B) Ratio (YES if the C/B ratio is less than the average C/B ratio of $21,277)	NO	YES	YES	YES	NO	YES	NO	YES	NO	NO	NO	NO
Estimated C/B Ratio ($/Truck Reduced vs. No-Build in 2045)	$22,430	$21,045	$19,007	$18,937	$23,610	$17,367	$21,720	$16,628	$24,200	$21,925	$23,800	$24,650

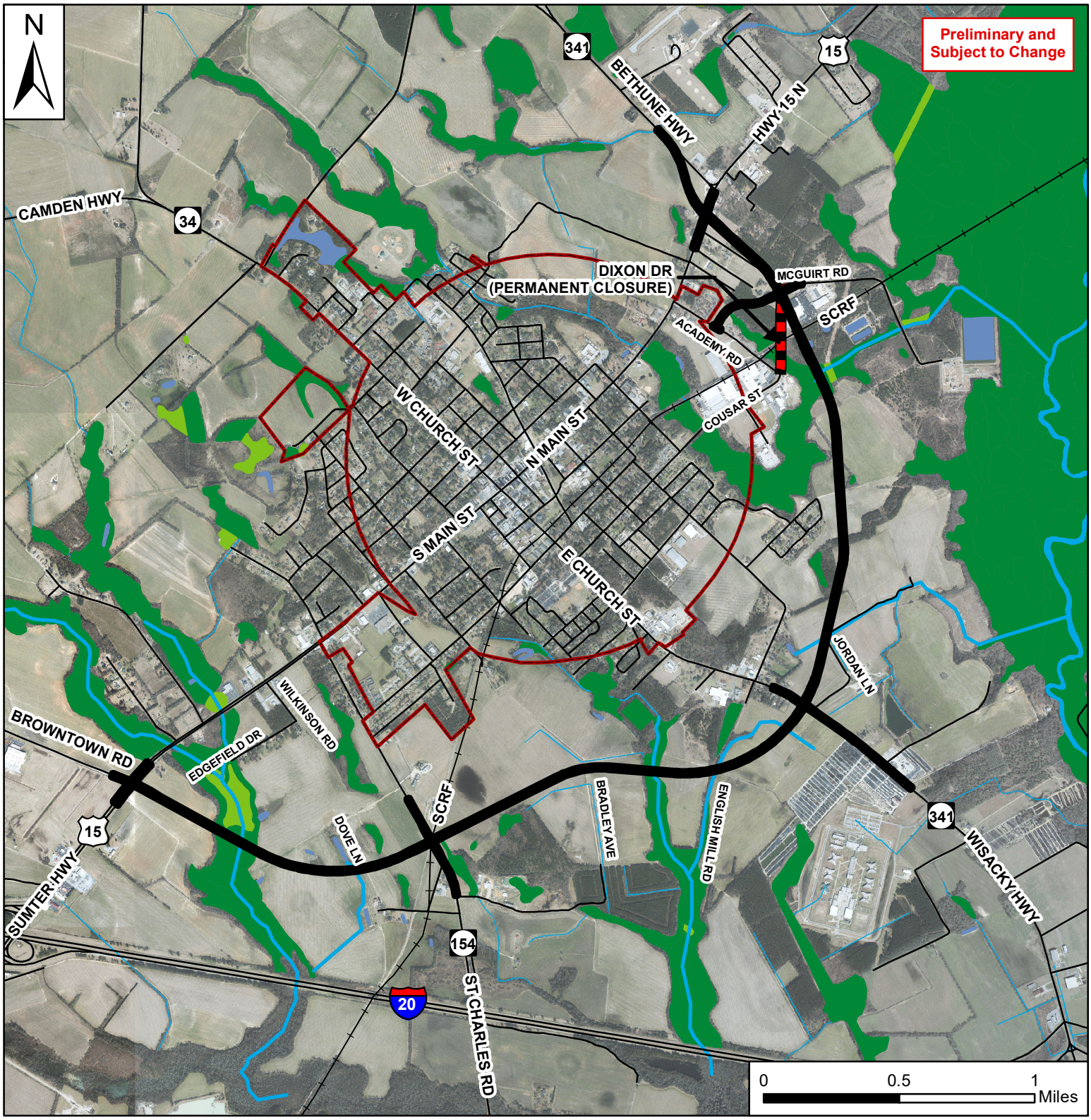
Note: Potential impact estimates for all build alternatives were calculated based on the proposed footprint plus a 25-foot buffer and are subject to change.

[5] The *Section 404 (b)(1) Guidelines* state: alternatives that are practicable are those that are available and capable of being done by the applicant after considering cost, existing technology, and logistics in light of the project purpose; an alternative needs to fail only one practicability factor to be eliminated during the screening process; and that if it is otherwise a practicable alternative, an area not presently owned by the applicant that could reasonably be obtained, utilized, expanded, or managed to fulfill the overall purpose of the proposed activity can still be considered a practicable alternative.

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Rivers and Streams
Road
SCRF Railroad
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary
Preferred Alternative

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Preferred Alternative

Figure 3-7

4 EXISTING CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

4.1 Land Use

This section includes an overview of existing land use, project consistency with local land use plans, and future growth trends to assess potential land use impacts. Using comprehensive planning and zoning processes, the City of Bishopville and Lee County identify goals in their plans. Established regional plans also provide a framework for future growth and development.

SLRCOG

The SLRCOG works with SCDOT and other transportation stakeholders to conduct transportation planning for the region.

The Santee-Lynches Regional Council of Governments (SLRCOG) is the regional planning organization that serves Clarendon, Kershaw, Lee, and Sumter counties and their associated municipalities. The SLRCOG provides a diverse array of services, including transportation and land use planning.

4.1.1 How was land use analyzed?

The SLRCOG provided Geographic Information System (GIS), parcel, and zoning data, which was used to identify land use in the project study area. Unclassified parcels were assigned a land use type based on recent digital aerial photography, field visits, local plans and policies, and coordination with SLRCOG staff. The 11 categories of existing land use and two categories of future land use are discussed in detail in **Section 4.1.2.3**.

4.1.2 What is the existing land use of the project study area?

The study area encompasses about 15,000 acres of land, excluding roadways and bodies of water. The City of Bishopville has a commercial main street through the city center, with residential uses outside of the core. Outside of the Bishopville municipal boundary, land use transitions to rural farmland. The area has not experienced previous development pressures or changes in land use.

Larger industrial and commercial sites are located near I-20, including James Industrial Park off Wisacky Highway (SC 341) on the southeastern end of the study area and I-20 Industrial Center off Browntown Road on the southwestern end. The Lee Correctional Institution is located on the southern end of Wisacky Highway (SC 341). A portion of Lee State Park runs through the study area, following the Lynches River. The Lee County Airport is located in the northeast corner of the study area.

Land Use

Bishopville is a small, rural community located approximately 54 miles northeast of Columbia. The City of Bishopville encompasses about 2.3 square miles of relatively flat terrain. Land use is predominately rural with farmland surrounding the municipal limits.

4.1.2.1 Current Zoning

Existing land use in the study area falls into 11 categories, which are described in detail below and illustrated in **Figure 4.1-1**. The study area is predominately rural, with more than half the area zoned as Agricultural/Rural. Following agricultural, single-family residential has the second largest percentage of land use in the study area. Most single-family residential is located in the City of Bishopville. Vacant land is prevalent throughout the study area, primarily outside of the city center, and accounts for nearly 9% of land use (**Table 4.1-1**).

Table 4.1-1. Existing Land Use

Land Use Category	Total Acres	Percentage of Study Area
Agricultural/Rural	7,566	50.8%
Community Resource	503	3.4%
Core Commercial	39.8	0.3%
General Residential/Manufactured Housing	515	3.5%
General Commercial	957	6.4%
Heavy Industrial	1,099	7.4%
Historic Conservation	6.3	<0.1%
Light Industrial	852	5.7%
Professional, Medical, Office	181	1.2%
Single-Family Residential District	1,867	12.5%
Vacant Land	1,304	8.8%
Total	**14,890**	**100%**

Source: SLRCOG. (2020). GIS Data.

The land use categories are:

- Agricultural/Rural - land primarily used for agricultural and farming activities with scattered low-density residential and commercial uses.
- Community Resources - community facilities such as places of worship, parks, schools, etc.
- Core Commercial - characterized by wall-to-wall and lot-line-to-lot-line development, pedestrian walkways, and public parking lots.
- General Commercial - a wide range of business and commercial uses are permitted
- General Residential/Manufactured Housing - higher density residential development and a variety of housing types on small lots or in project settings, in areas accessible by major streets and in proximity to commercial uses and employment opportunities
- Heavy Industrial - primarily land that uses manufacturing and is industrial in nature, such as distribution, storage, and processing.
- Historic Conservation - existing historic and architecturally valuable structures and properties which serve as visible reminders of the history of the City of Bishopville.
- Light Industrial - land that accommodates wholesaling, distribution, storage, processing, and manufacturing uses in an environment suited to such uses while promoting land use compatibility.
- Professional, Medical, Office - office, institutional and residential uses in areas whose character is mixed or in transition, along major streets and subdivision borders characterized by older houses to reduce the consequences of change impacting these areas and provide a transitional buffer between potentially incompatible commercial and residential development.
- Single-Family Residential District - principal land use is detached, single-family dwellings and limited residential support facilities at low densities.
- Vacant Land - land that is currently undeveloped.

4.1.2.2 Local Plans

The project study area is located entirely in Lee County. In addition to the *Lee County Comprehensive Plan* (2020), several local plans are associated with the study area, including the *Santee-Lynches 2017-2022 Comprehensive Economic Development Strategy* (2017), *Forward 2045: Santee-Lynches Regional Long-Range Transportation Plan* (2019), and the *Bishopville Comprehensive Plan* (2011). These plans establish goals to guide development in the community and region.

Common concerns are noted in these plans, including acknowledgment of slow-moving and dangerous truck traffic along Bishopville's downtown. Safety concerns and transportation improvements are discussed as well as plans to progress the economic development of the area. Summaries of regional and local land use plans are provided below.

Lee County Comprehensive Plan Bishopville Project 2030 Addendum (2021)

> ***Lee County Comprehensive Plan Bishopville Project Addendum***
>
> *Bishopville Project 2030* outlines how Lee County, the City of Bishopville, TheLINK, the SLRCOG, and SCDOT have partnered together to find ways to better position the community for job growth and economic development. Funded improvements include establishing an alternate route for freight-carrying vehicles.

The *Lee County Comprehensive Plan Bishopville Project 2030 Addendum* was adopted on May 11, 2021. Lee County and the City of Bishopville are working together to find ways to improve economic opportunity and vitality. The addendum outlines how Lee County, the City of Bishopville, TheLINK Economic Development Alliance, the SLRCOG, and the SCDOT have all partnered together to find ways to improve the movability of goods, make the area safer for motorists, and revitalize economic opportunity.

The initial efforts are a result of three separate federal bills passed between 2003 and 2005 that set aside earmark funding totaling $5.6 million for freight transportation improvements in Lee County near the City of Bishopville and a partnership with the SLRCOG, which has committed $14 million to these improvements. The improvements include establishing an alternative route for freight-carrying vehicles. The new route will allow for the safe and more reliable movement of goods in and through the area, which will ultimately improve opportunity at the local industrial parks by demonstrating reliability in moving goods, which will result in reduced travel times and reduced travel costs.

Lee County has two certified industrial parks in the area that provide large-scale business opportunities. James Industrial Park is located near the I-20 and Wisacky Highway (SC 341) interchange, and I-20 Industrial Center is located near the I-20 and Sumter Highway (US 15) interchange. The parks sit on major freight corridors that produce large volumes of freight traffic, and being located near I-20 makes them attractive to industry by providing a reliable way to move goods.

The new route will also reduce congestion in downtown Bishopville, which will make downtown safer for motorists, bicyclists, and pedestrians. These improvements will benefit Lee County and the City of Bishopville by making downtown more walkable and user-friendly. Studies have shown that a safer and more walkable downtown attracts visitors, which increases opportunities for new business. With more individuals visiting and enjoying downtown, economic opportunities for the City of Bishopville and Lee County will improve as businesses look to locate there to tap into the potential patrons enjoying a revitalized Bishopville.

Lee County Comprehensive Plan (2020)

The *Lee County Comprehensive Plan* was adopted on June 9, 2020. The plan includes data and trends in the county, emphasizes current and future needs, provides recommendations, and is used as a guide for development and growth in the county. The plan is organized into several elements: population, economic conditions, natural assets, cultural resources, community facilities, housing, land use, transportation, priority investment, existing goals and needs, and recommendations.

Lee County is predominately non-urbanized, comprised of about 405 square miles and a population of nearly 18,000. The region is dominated by agricultural land, with more than 110,000 acres of farmland and nearly 50,000 acres of forest land. The plan identifies the land cover for the region, showing development concentrated within the core of the City of Bishopville and surrounding land comprised of cultivated crops and woody wetlands.

The general direction for future development involves balancing rural and urban development and combining urban-rural strategies. The plan notes that capitalizing on the high traffic volumes along I-20 will aid in the support of local tourism and economic growth. Future development goals include encouraging the development of affordable housing near planned industrial and employment nodes, attracting new industries and businesses while maintaining agricultural resources, and promoting the development of the I-20 corridor businesses.

Forward 2045: Santee-Lynches Regional Long-Range Transportation Plan (LRTP) (2019)

> **Forward 2045**
>
> The *Forward 2045: Santee-Lynches Regional Long-Range Transportation Plan* identifies multi-modal solutions to improve system reliability and slow-moving freight traffic.

The *Forward 2045: Santee-Lynches Regional LRTP* was adopted on June 3, 2019. This plan specifically addresses the transportation needs and vision for the region. In addition to the current and future transportation needs, the plan lays out long-term transportation goals and opportunities and identifies the multi-modal strategies to address needs through 2045. As Lee County has had a continuous decline in population between 2000 and 2017 and has a high concentration of poverty, Lee County is focused on enhancing the economic development of downtown Bishopville.

The latest available land use, population, employment, travel, and economic assumptions were analyzed to verify consistency with the transportation improvements in the region. Lee County has 115 proposed projects and there are several fiscally constrained projects listed by rank in priority. This includes three roadway projects in the study area: US 15 from Browntown Road to I-20 (ranked 5th), Wisacky Highway (SC 341) from Main Street (US 15) to I-20 (ranked 7th), and Main Street (US 15) from Bethune Highway (SC 341) to Edmund Avenue (ranked 8th). Two fiscally constrained intersection projects are in the study area: the intersection of Main Street (US 15) and I-20 and the intersection of Main Street (US 15) and Gregg Street. The issue of slower-moving freight traffic is acknowledged and solutions are being identified to improve system reliability.

Santee-Lynches 2017-2022 Comprehensive Economic Development Strategy (CEDS) (2017)

The *Santee-Lynches 2017-2022 CEDS* was developed by the SLRCOG and adopted by the Board of Directors on September 26, 2017. The *CEDS* assesses progress in the region and allows for adjustments to improve returns on previous public investments. The plan incorporates collaboration and coordination of both public and private sector interests to analyze the demographics, infrastructure systems, and economic trends and conditions in the region and lists comprehensive goals and plans for the region, which includes Clarendon, Kershaw, Lee, and Sumter counties.

Downtown Bishopville

Although downtown Bishopville is not the retail center it once was, commercial development has retained a centralized downtown location.

The region is identified as having a diverse natural landscape, with nearly 24% of the land cover used for agricultural purposes. Future land use strategies for the area include planning and expansion of business development sites and buildings to attract new businesses. The action plan identifies the importance of developing critical infrastructure, including both water and wastewater infrastructure and the roadway network, to support expansion. The Bishopville Truck Route is identified as a long-term priority project.

Bishopville Comprehensive Plan (2011)

The *Bishopville Comprehensive Plan* adopted on November 1, 2011, is a guide to the physical, social, and economic growth and development of the community. It identified nine elements where goals were established in recognition of existing conditions and needs. These nine elements include population, housing, economic development, natural resources, cultural resources, community facilities, land use, transportation, and priority investment.

The plan emphasizes the importance of maintaining the downtown due to its role in Bishopville's culture. The plan notes that downtown serves as a reminder of the past and reflects on the town's culture and that it is important to the community that future planning is sensitive to Bishopville's heritage. Although the downtown area is no longer the retail center it once was, there are plans to transition the area into specialty shops and restaurants while still maintaining its historical appeal.

The plan notes that Bishopville has a relatively small workforce, that agricultural and manufacturing industries have seen a significant decline in recent years, and that the business sector is relatively strong and continues to grow. Economic goals for Bishopville are identified in the plan, including creating new industries and businesses and supporting the development of the I-20 corridor.

Increasing truck traffic on Main Street (US 15) was identified as a problem in the plan. At a public forum in 2006, the public expressed interest in an alternate route that would alleviate truck traffic through downtown Bishopville. The route would create a safer route through downtown and would help to improve air quality along Main Street (US 15) by reducing the hours of truck operation. The plan notes the City's intention to work with SCDOT and SLRCOG on major road and highway improvement projects.

4.1.2.3 Future Development

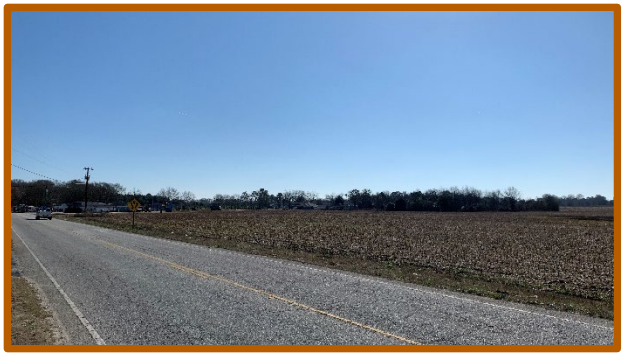
The SLRCOG has identified areas where urban expansion and land development are anticipated for the future and areas where redevelopment is likely and preferred. In the *Lee County Comprehensive Plan* (2011), the areas anticipated to experience growth and development are zoned as part of the:

- *Development Holding District (DHD)* – the DHD is comprised of land tracts located primarily on the fringe of urban growth where the predominant character of urban development has not been fully established, but where the current characteristics of use are predominantly residential, agricultural, or similar development, with scattered related uses; or the
- *Redevelopment District (RD)* – the RD is an area where the intent is to encourage efficient redevelopment of the central city areas whose predominant character is no longer industrial or where more efficient use of the land can be promoted by redevelopment.

The DHD is zoned for nearly 1,700 acres of land located in the study area. All 12 build alternatives are in the DHD. The RD, which is located in the downtown center, is zoned for 9 acres. The updated *Lee County Comprehensive Plan* (2020) discusses how improvement districts are implemented and funded. The districts allow for local government to plan and implement public infrastructure improvements and to apply assessments on property in the district (with the concurrence of property owners) to pay all or a portion of the cost of the improvements.

4.1.3 How would the alternatives impact land use?

The build alternatives will require the direct conversion of existing non-transportation land uses to transportation uses in the project study area. **Table 4.1-2** includes the estimated acreage of each land use type impacted by each alternative. These estimates only include non-transportation land and do not account for additional ROW that may be required. The build alternative impacts range from 53.4 to 64.0 acres and are anticipated to impact nine categories of existing land use, with the majority of anticipated impacts on agricultural/rural land in the study area. As shown in **Figure 4.1-2**, the majority of impacted land is located in the DHD.



4.1.3.1 No-Build Alternative

Minimal development and resulting land use changes are expected with the No-Build Alternative.

4.1.3.2 Build Alternatives

As seen in **Table 4.1-2**, Alternative 1 would have the greatest impact on land use, requiring the conversion of about 63 acres of land. Alternative 6 (Preferred Alternative) is estimated to result in the conversion of about 64 acres of land, including 44 acres of agricultural land. Alternative 12 would have the least impact on land use requiring the conversion of about 53 acres of land.

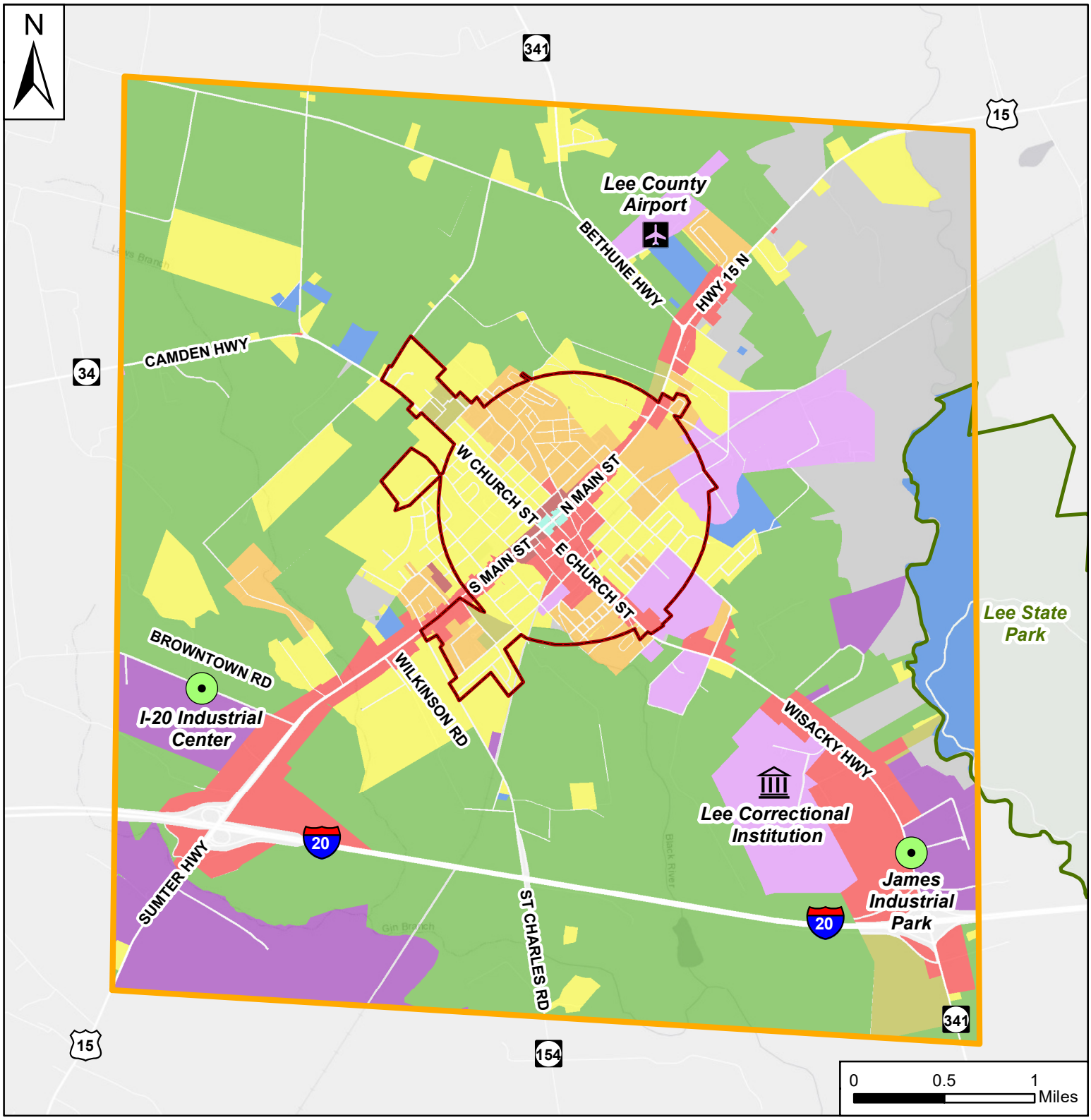
4.1.4 How will land use impacts be mitigated?

Transportation projects can also result in indirect and cumulative impacts in the form of induced development or other land use influences. Any new development would be guided by adopted zoning regulations and land use plans. **Section 4.13** provides a detailed discussion of the potential indirect and cumulative effects of the project.

Table 4.1-2. Potential Land Use Impacts by Alternative

Land Use Category	Potential Impact by Alternative (acres)												
	No-Build	1	2	3	4	5	6 (PA)	7	8	9	10	11	12
Agricultural/ Rural	0.0	46.7	31.7	34.9	34.8	41.8	43.7	36.6	33.5	37.9	33.0	37.9	33.0
Community Resource	0.0	0.0	1.5	1.5	1.5	1.5	1.5	0.0	1.5	0.0	1.5	0.0	1.5
General Residential/ Manufactured Housing	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.0	0.8	0.0	0.8	0.0	0.8
General Commercial	0.0	3.9	3.2	5.1	4.7	3.2	4.9	3.9	4.9	4.1	3.4	3.7	3.0
Heavy Industrial	0.0	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Light Industrial	0.0	4.8	5.3	5.7	5.7	5.3	5.7	4.8	5.7	4.8	5.3	4.8	5.3
Professional, Medical, Office	0.0	0.0	<0.1	0.1	<0.1	<0.1	<0.1	0.0	<0.1	0.0	<0.1	0.0	<0.1
Single-Family Residential	0.0	4.2	15.0	12.1	10.2	6.7	7.2	12.5	15.5	9.1	11.6	7.2	9.7
Vacant Land	0.0	3.4	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4	0.0	3.4	0.0
Total	**0.0**	**63.2**	**57.6**	**60.3**	**57.8**	**59.5**	**64.0**	**61.3**	**62.0**	**59.4**	**55.7**	**57.1**	**53.4**

Source: Based on calculations of direct conversion to transportation use from GIS data provided by SLRCOG.
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.



Agricultural/Rural
Community Resource
Core Commercial
General Commercial
General Residential/ Manufactured Housing
Heavy Industrial
Historic Conservation
Light Industrial
Professional, Medical, Office
Single-Family Residential District
Vacant Land
Study Area
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

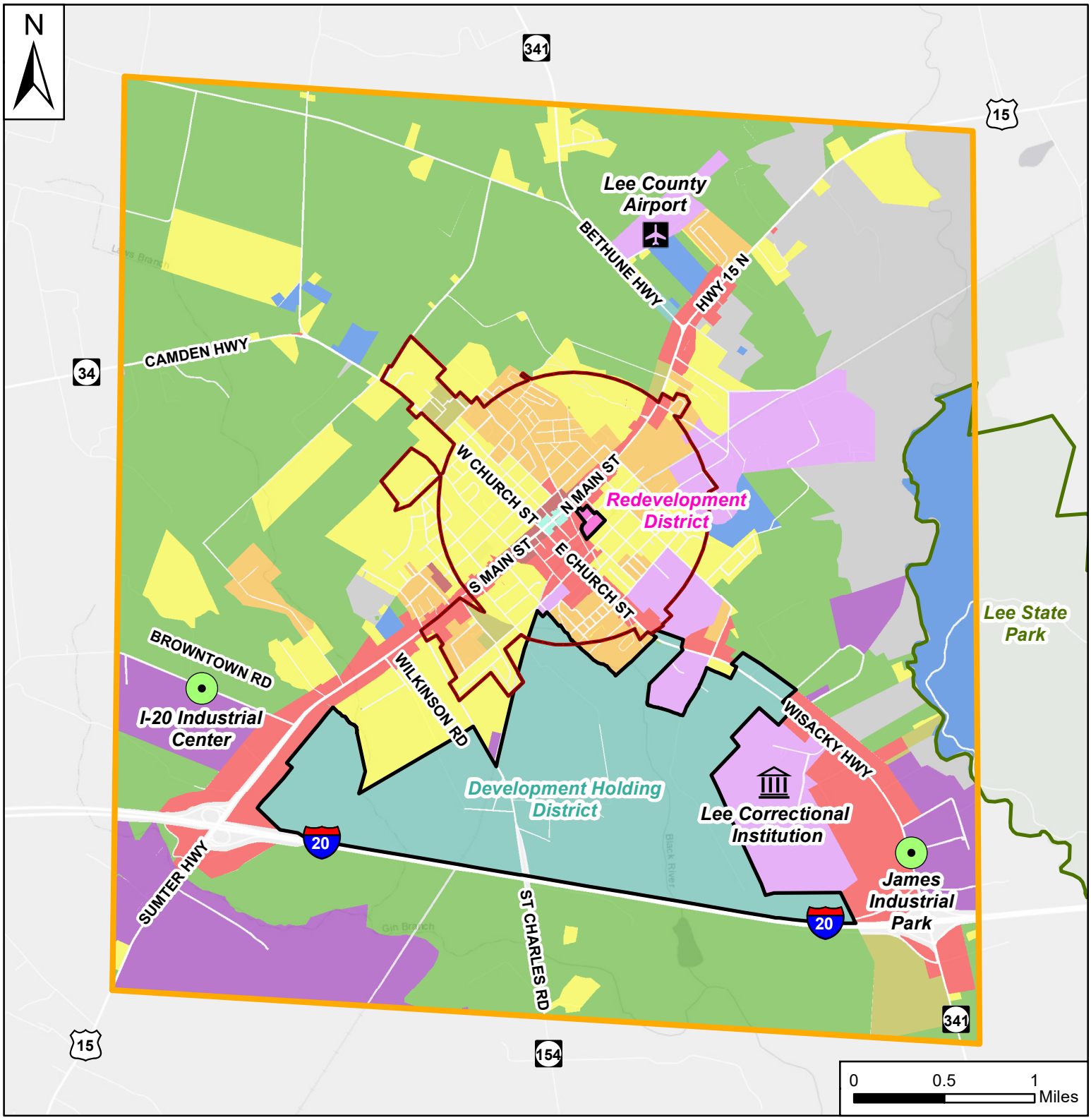
Existing Land Use

Figure 4.1-1

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Agricultural/Rural	General Residential/ Manufactured Housing	Redevelopment District
Community Resource	Heavy Industrial	Single-Family Residential District
Core Commercial	Historic Conservation	Vacant Land
Development Holding District	Light Industrial	Study Area
General Commercial	Professional, Medical, Office	Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Future Land Use

Figure 4.1-2

4.2 Farmlands

This section summarizes the presence of existing farmlands, evaluates the impacts of the project on farmland soils regulated by the *Farmland Protection Policy Act (FPPA),* and summarizes potential mitigation documented in the *Bishopville Truck Route Project Farmlands Technical Memorandum* (2021), which is located in **Appendix E**.

4.2.1 Why are farmlands important to the area?

From the early 19th century until 1887, Bishopville was characterized as a small community, with less than 200 inhabitants and an economy dominated by agriculture. During this period, the rural landscape of Lee County contributed greatly to the production of cotton and the county's acknowledgment as a leader in the state. The City of Bishopville was a major producer of cotton and became a significant location for cotton distribution. Local cotton production had a distinctive reputation for color, length, and strength of fiber, attracting many buyers. The cotton industry continued to dominate the region, increasing the population in the area.

In the 1920s and 1930s, the cotton industry began to wane, and the agricultural sector saw a significant decline. According to the *Bishopville Comprehensive Plan* (2011), the industry continued to decline through 2007. Farm acreage and the number of farms decreased, but the size of the average farm increased. Farmers were able to produce more goods on less land as better technology became available. According to the *Lee County Comprehensive Plan* (2020), the industry saw a 73% increase from 2010 to 2017.

The *2013-2017 United States Census (US Census) American Community Survey (ACS)* reported 4% (260 individuals) of the Lee County workforce whose primary occupation was in the agricultural industry. The 2017 US Census of Agriculture reported 231 individuals as full owners of farms, with 188 reporting farming as their primary occupation.

Table 4.2-1 provides statistics for agricultural land use based on the United States Department of Agriculture (USDA) 2012 and 2017 US Census of Agriculture. Approximately 42% of the land area of Lee County was farms in 2017, which was a decrease of 12% from 2012. The number of farms decreased by 13% between 2012 and 2017, as did the average farm size, from 369 to 330 acres.

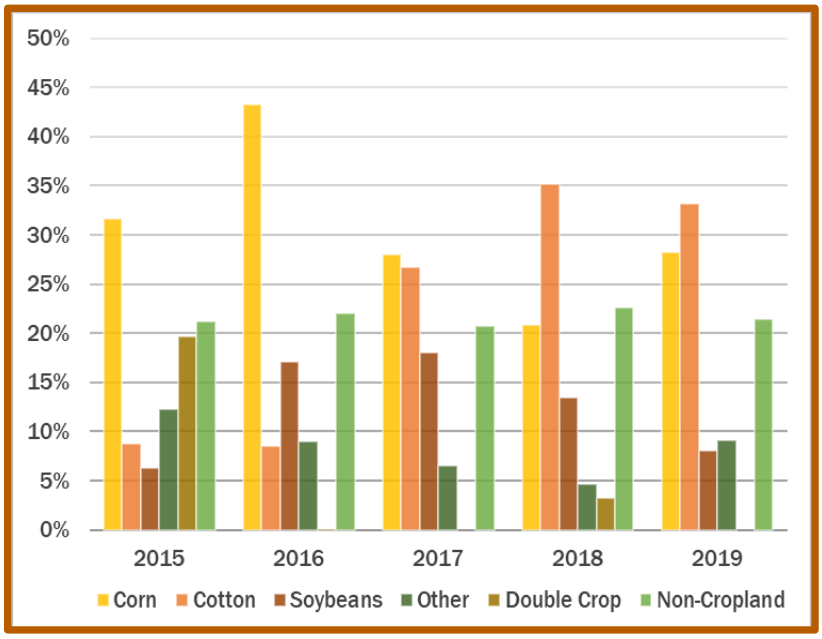
Table 4.2-1. Agricultural Land Use in Lee County and South Carolina

Land Use	Lee County (2012)	Lee County (2017)	South Carolina (2012)	South Carolina (2017)
Approximate Land Area (acres)	262,515	262,515	19,239,040	19,239,040
Land in Farms (acres)	142,449	110,211	4,971,244	4,744,913
Number of Farms	386	334	24,791	25,266
Average Size of Farm (acres)	369	330	197	191

Source: (2021). *Bishopville Truck Route Project Farmlands Technical Memorandum*.
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

The main food and fiber crops produced are grains, oilseeds, dry beans, dry peas, cotton, and cottonseed. In South Carolina, Lee County ranks 11th for grain, oilseed, dry bean, and dry pea production and 7th for cotton and cottonseed production (out of 46 counties). In 2017, food and fiber crops were valued at $36,550,000and livestock was valued at $58,733,000. Poultry and eggs are the top livestock raised in Lee County, and the county ranks 10th in the state for production. **Exhibit 4-1** illustrates crop production in the study area from 2015 to 2019 (AcreValue, 2021).

Exhibit 4-1. Crop Production in the Study Area (2015 - 2019)



4.2.2 What are the types of farmland and how are they protected?

The Natural Resources Conservation Service (NRCS) is the lead agency that determines the suitability of farmlands. The NRCS designates eligible farmland as being "prime," "unique," or "farmland of statewide or local importance" (7 USC 4201(c)(1)(A)).

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, or oil-seed and other crops with minimum inputs of fuel, fertilizer, pesticides, and labor without intolerable soil erosion. Prime farmland includes land that possesses the above characteristics and may include land used as cropland, pastureland, rangeland, or forestland. It does not include land in or committed to urban development or water storage.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. This type of farmland has a combination of soil quality, location, growing season, and moisture supply needed to economically produce high quality or high yields of specific crops when treated and managed according to acceptable farming methods. These crops include lentils, nuts, annually cropped white wheat, cranberries, citrus, other fruits, olives, and vegetables.

Statewide or locally important farmland is land that has been designated of state or local importance for the production of food, feed, fiber, forage, or oil-seed crops as determined by state or local government agencies but is not of national significance. At the local level, land use is regulated by Lee County through planning and zoning ordinances.

The *FPPA*, 7 USC 4201-4202, and its implementing regulations, 7 CFR Part 658, was enacted to reduce and minimize impacts that federal programs may have on farmlands and protect farmlands from conversion to non-agricultural uses. Prior to farmlands being used for a federal project, an assessment must be completed to determine if farmlands would be converted to non-agricultural uses. If the assessment determines the use of farmland is in excess of the parameters defined by the NRCS, then the federal agency must take measures to minimize the impacts on these farmlands.

4.2.3 How were farmland soils and potential impacts analyzed?

Designated Farmland

The NRCS designates eligible farmland as being "prime," "unique," or "farmland of statewide or local importance."

Analysis of farmland soils and impacts was completed in two steps: 1) review of soils in the project area using the NRCS Soil Survey Geographic Database (SSURGO) for Lee County and 2) preparation of an NRCS farmland conversion impact rating form based on the parcel and tax assessor data provided by Lee County. Farms were identified based on attributes provided in the tax assessor database. Specifically, parcels that were coded with the "AG" classification were considered active farms for the analysis. The SSURGO database is used to identify soils that are classified by the NRCS as prime and unique farmland, or farmland of statewide or local importance in specific project areas. Using GIS, the soil data was intersected with the limits of disturbance for each alternative to evaluate impacts. The *Bishopville Truck Route Project Farmlands Technical Memorandum* (2021) provides a detailed discussion of designated farmland soil types (**Appendix E**).

The impact rating for each alternative used the implementing regulations for the *FPPA,* 7 CFR Part 658, and the *USDA NRCS Part 523 — Farmland Protection Policy Act Manual*. The conversion impact rating methodology consists of determining a score using two values to represent the magnitude of the farmland impact: the "relative value" and the "corridor assessment value."

The NRCS is responsible for developing the relative value, which is based on a scale of 0 to 100 points. Federal Highway Administration (FHWA)/South Carolina Department of Transportation (SCDOT) is responsible for developing the corridor assessment value using a scale of 0 to 160, which pertains to the use of land, the availability of farm support services, investments in existing farms, and the amount of land that could be rendered non-farmable with the construction of the project.

An impact rating is developed by totaling the relative value and the corridor assessment value for a maximum score of 260 points (260 being the greatest impact). Alternatives receiving a total score of fewer than 160 points are given a minimal level of consideration for protection, and no additional alternatives that would avoid farmland impacts need to be identified (7 CFR 658.4(c)).

4.2.4 How would the project affect farmland in the area?

All build alternatives would affect farmland in the project study area. **Table 4.2-2** summarizes the estimated impacts on farmland by alternative.

4.2.4.1 No-Build Alternative

The No-Build Alternative would not require the conversion of farmlands to transportation use,

4.2.4.2 Build Alternatives

All 12 build alternatives would have impacts on farmland. As seen in **Table 4.2-2** and **Figure 4.2-1a-1d**, Alternative 1 is estimated to have the greatest impact on designated farmland, affecting about 79 acres of designated farmland, including 61 acres of prime farmland and 7 acres of statewide importance. Alternative 10 is estimated to have the least impact on designated farmland, affecting about 69 acres of designated farmland, including 56 acres of prime farmland and 8 acres of statewide importance. Alternatives 2 and 10 would have the least impact on prime farmland affecting approximately 56 acres each. Alternatives 11 and 12 would have the least impact on farmland of statewide importance affecting about 5 acres each. Alternative 6 (Preferred Alternative) is estimated to affect about 78 acres of designated farmland, including 63 acres of prime farmland and 8 acres of statewide importance.

Table 4.2-2. Potential Farmland Soil Impacts by Alternative

Alternative	Prime Farmland	Farmland of Statewide Importance	Prime Farmland if Drained	Not Prime Farmland	Total
	Acres (% of Total)	Acres (% of Total)	Acres (% of Total)	Acres (% of Total)	Acres
No-Build	0.0	0.0	0.0	0.0	0.0
Alternative 1	61.1 (77.5)	7.3 (9.2)	0.5 (0.6)	10.0 (12.7)	78.9
Alternative 2	56.2 (78.9)	8.3 (11.6)	0.6 (0.8)	6.1 (8.6)	71.2
Alternative 3	59.8 (81.6)	8.0 (10.9)	0.5 (0.7)	5.0 (6.8)	73.3
Alternative 4	62.1 (84.6)	5.8 (8.0)	0.5 (0.7)	5.0 (6.8)	73.4
Alternative 5	59.4 (80.3)	7.6 (10.3)	0.5 (0.7)	6.5 (8.8)	74.0
Alternative 6 (PA)	63.0 (80.6)	8.0 (10.3)	0.5 (0.6)	6.6 (8.5)	78.1
Alternative 7	57.9 (76.1)	7.9 (10.4)	0.6 (0.8)	9.6 (12.7)	76.0
Alternative 8	59.7 (79.3)	8.7 (11.5)	0.6 (0.8)	6.3 (8.3)	75.3
Alternative 9	58.0 (78.3)	7.2 (9.8)	0.5 (0.7)	8.3 (11.2)	74.0
Alternative 10	56.3 (81.3)	7.6 (11.0)	0.5 (0.7)	4.8 (7.0)	69.2
Alternative 11	60.3 (81.2)	5.1 (6.9)	0.5 (0.7)	8.3 (11.2)	74.2
Alternative 12	58.6 (84.5)	5.4 (7.9)	0.5 (0.7)	4.8 (6.9)	69.3

Source: (2021). *Bishopville Truck Route Project Farmlands Technical Memorandum.*
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

As seen in **Table 4.2-3**, the relative value assessment values for the build alternatives range from 80 to 83 points, the corridor assessment values for the build alternatives range from 93 points to 97 points, and the combined farmland conversion scores range from 173 to 178 points. The farmland conversion ratings for all 12 alternatives exceed the combined impact rating threshold of 160 points.

Although the alternatives exceeded the combined impact rating threshold, the NRCS stated in their April 15, 2020 responses letter, *"It is our finding that none of the proposed alternatives significantly impacts prime farmland and farmland of statewide importance in the county since only approximately 0.04% will be converted under any of the scenarios"*. More information on farmland conversion ratings can be found in the *Bishopville Truck Route Project Farmlands Technical Memorandum* (2021), which is located in **Appendix E**.

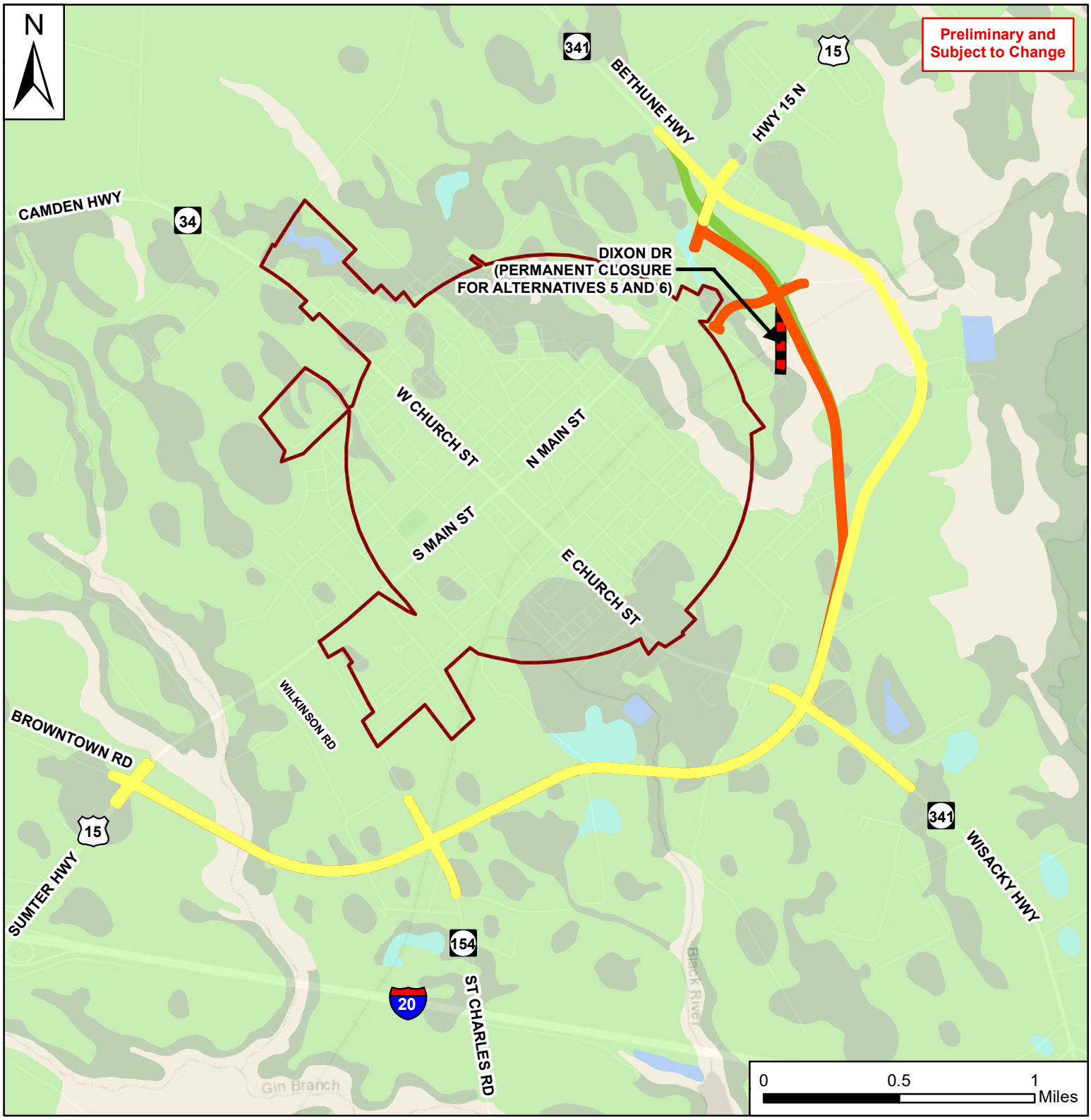
Table 4.2-3. NRCS Farmland Conversion Score

Alternative	Relative Value	Corridor Assessment Value	Farmland Conversion Score
Alternative 1	80	93	173
Alternative 2	81	95	176
Alternative 3	83	94	177
Alternative 4	83	93	176
Alternative 5	81	94	175
Alternative 6 (PREFERRED)	81	94	175
Alternative 7	80	96	176
Alternative 8	81	92	173
Alternative 9	81	97	178
Alternative 10	82	93	175
Alternative 11	82	96	178
Alternative 12	83	93	176

Source: (2021). *Bishopville Truck Route Project Farmlands Technical Memorandum.*

4.2.5 How are farmland impacts being minimized?

Although all of the build alternatives exceeded the combined impact rating threshold of 160 points, no mitigation is required based on the determination by NRCS. Property boundaries were taken into consideration during preliminary design when developing the build alternatives to avoid dividing agricultural properties and avoid taking or disrupting agricultural land uses. To the greatest extent possible, agricultural properties were avoided to keep agricultural businesses in production. However, further avoidance and minimization of impacts on farmlands will be evaluated during final design if a build alternative is selected. Access issues related to divided parcels and the location of pivot points will be addressed during the right-of-way acquisition process.



Permanent Road Closure

Farmland of Statewide Importance

Not Prime Farmland

Prime Farmland

Prime Farmland if Drained

Water

Alternative 1

Alternative 5

Alternative 6

Municipal Boundary

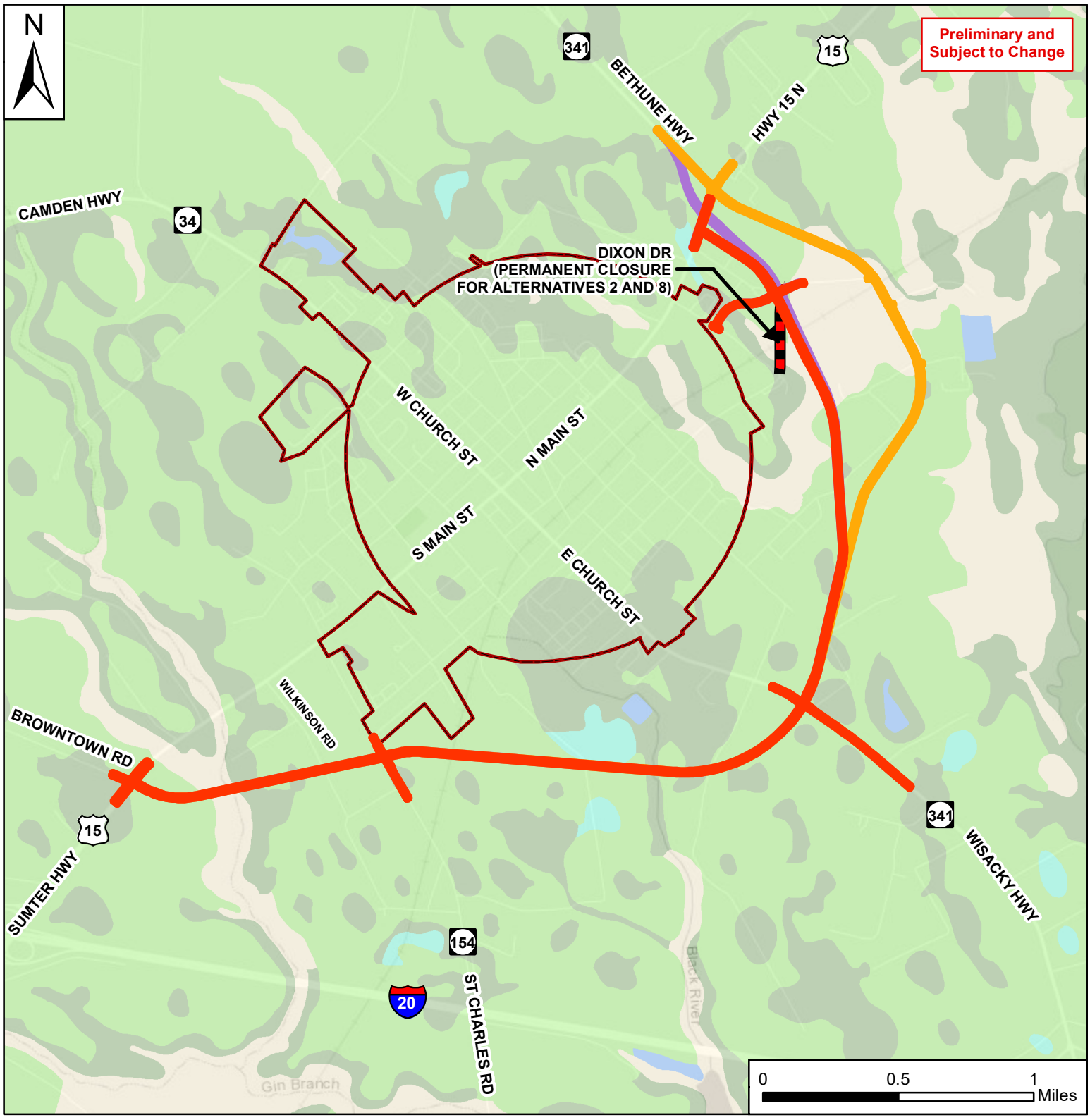
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential Farmland Soil Impacts – Alternatives 1, 5, and 6

Figure

4.2-1a



Permanent Road Closure

Farmland of Statewide Importance

Not Prime Farmland

Prime Farmland

Prime Farmland if Drained

Water

Alternative 2

Alternative 7

Alternative 8

Municipal Boundary

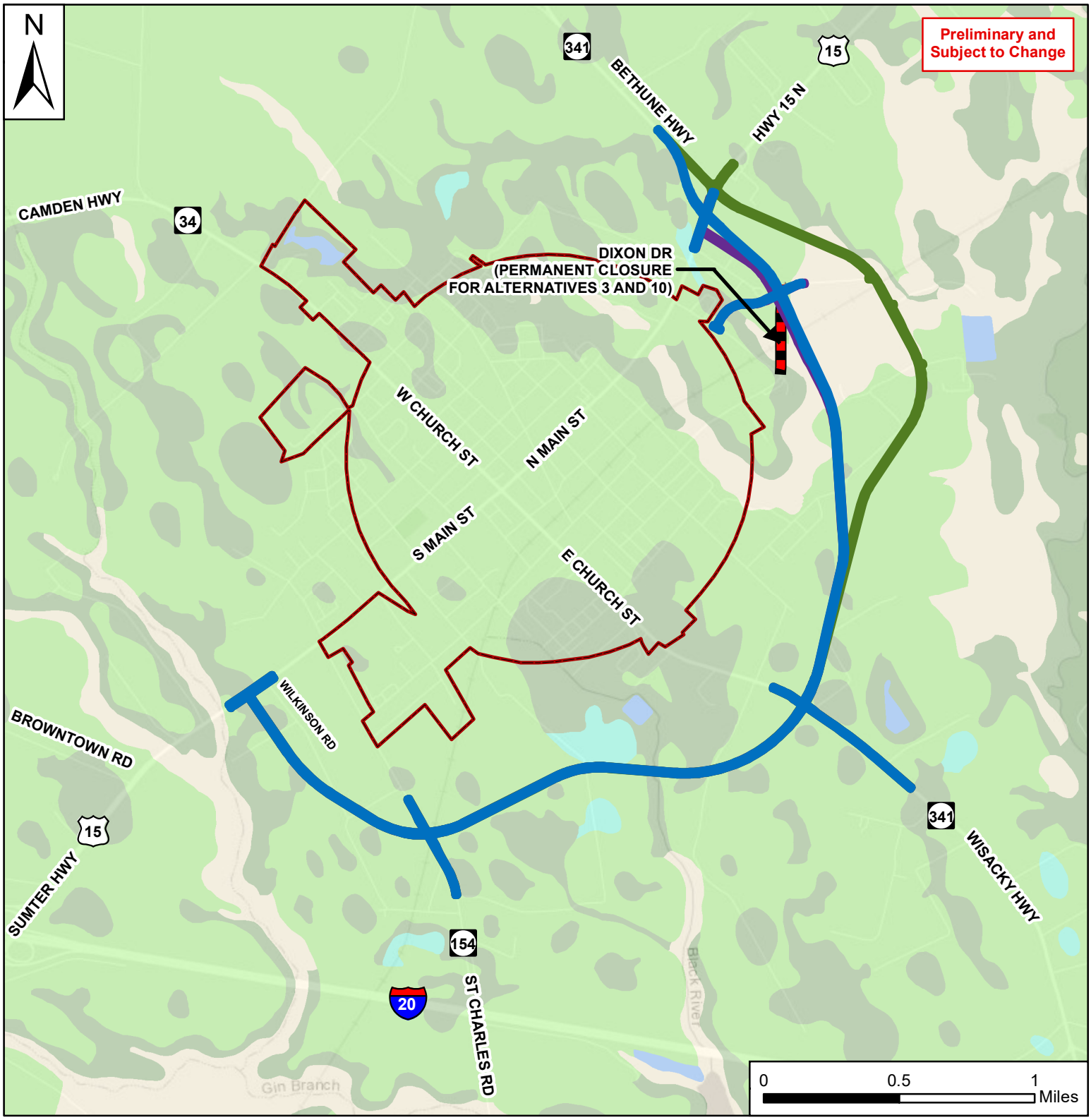
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential Farmland Soil Impacts – Alternatives 2, 7, and 8

Figure

4.2-1b



Permanent Road Closure

Farmland of Statewide Importance

Not Prime Farmland

Prime Farmland

Prime Farmland if Drained

Water

Alternative 3

Alternative 9

Alternative 10

Municipal Boundary

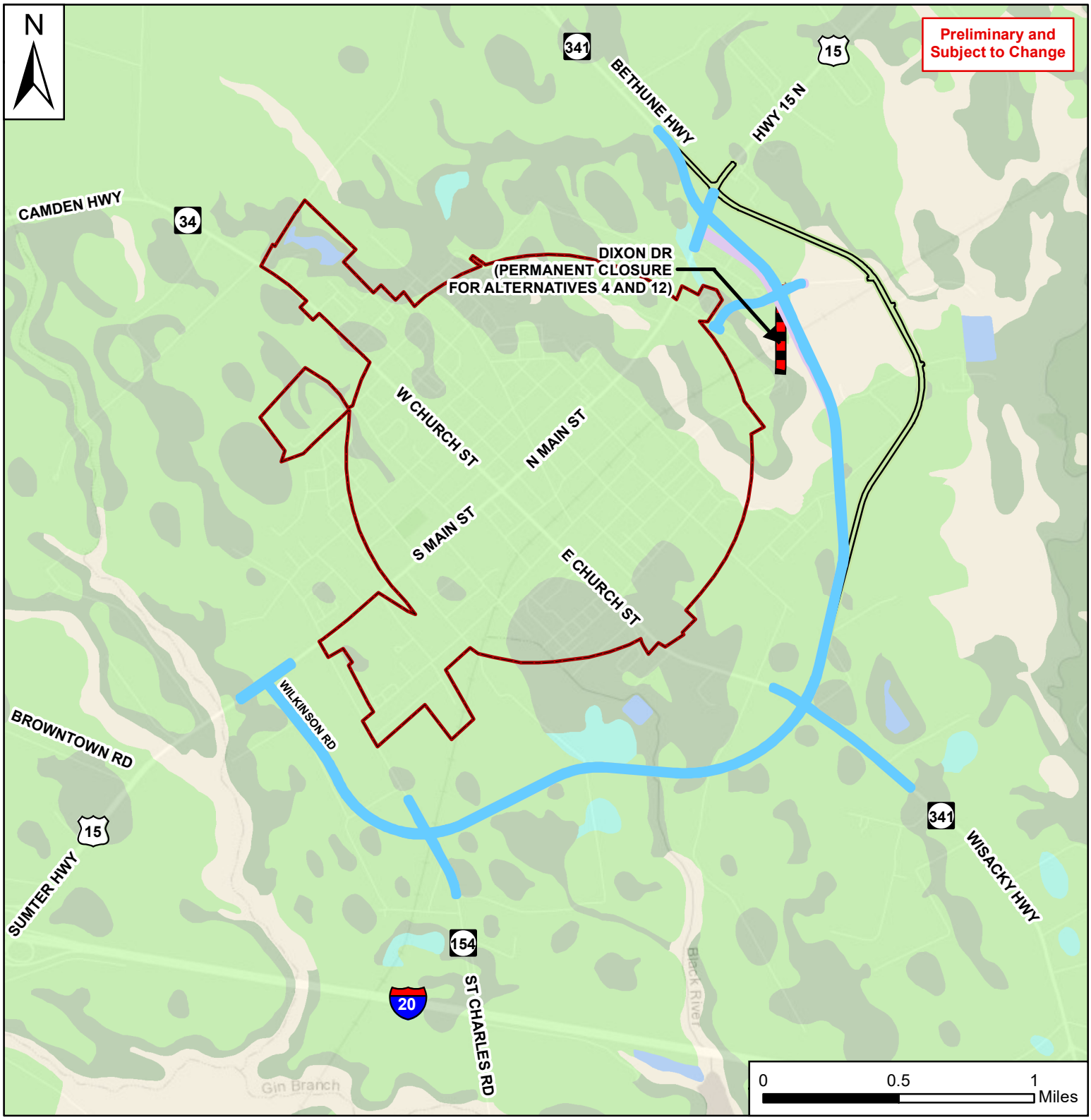
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential Farmland Soil Impacts – Alternatives 3, 9, and 10

Figure

4.2-1c



Permanent Road Closure

Farmland of Statewide Importance

Not Prime Farmland

Prime Farmland

Prime Farmland if Drained

Water

Alternative 4

Alternative 11

Alternative 12

Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential Farmland Soil Impacts – Alternatives 4, 11, and 12

Figure

4.2-1d

4.3 Socioeconomics and Communities

This section presents the existing study area's socioeconomic and demographic characteristics such as population, employment, and other important information about communities and community resources that may be affected by the proposed project. This section also discusses minority and low-income populations, which make up a large percentage of the population in the study area. More information can be found in the *Bishopville Truck Route Project Community Impact Assessment* (2021), which is located in **Appendix F**, and the *Bishopville Truck Route Project Environmental Justice Assessment* (2021), which is located in **Appendix G**.

4.3.1 What methods and data were used to analyze the study area?

Data were obtained from several sources, including but not limited to field visits, local and regional government websites, documents, and plans. US Census data at the block group (BG) level (if available) was used to evaluate demographics, economics, and growth trends in the study area. Due to the rural nature of the area, the block groups are large, but they are considered reasonable representations of the area's demographics. As seen in **Figure 4.3-1**, the study area is comprised of eight block groups that are wholly or partially located in the study area.

Bishopville is a rural community with geographically large block groups, and GIS data at the neighborhood level is not available. Therefore, "residential areas" were identified to assist with the analysis of potential impacts of the project on smaller areas (or "microcommunities") of the Bishopville community. These residential areas were determined based on parcel boundaries, field visits, and discussions with residents. The residential areas are discussed in **Section 4.3.3** and shown in **Figure 4.3-2a-2d**.

4.3.2 What are the existing characteristics of the study area?

Lee County is approximately 411 square miles of predominately agricultural land use. The county includes two incorporated municipalities: the Town of Lynchburg and the City of Bishopville, the county seat. Various socioeconomic forecasts suggest continued economic stagnation in Lee County. Population and employment forecasts do not indicate growth in the foreseeable future.

The City of Bishopville is a small, rural community located approximately 54 miles northeast of Columbia. The city encompasses about 2.3 square miles of relatively flat terrain, with farmland surrounding the municipal limits. Business and commercial development are centralized along Main Street (US 15) and are surrounded by mixed residential use.

There are two large industrial and commercial sites inside the city limits: James Industrial Park, which is located north of the intersection of I-20 and Wisacky Highway (SC 341), and the I-20 Industrial Center, which is located along Browntown Road north of I-20. **Exhibit 4-2** illustrates the existing conditions of the study area.

Exhibit 4-2. Study Area Existing Conditions

4.3.2.1 Community Characteristics

US Census data was used to evaluate demographics, economics, and growth trends in the area. Comparisons are made to the state, county, and city data to identify area trends and characteristics.

Population Trends

Table 4.3-1 presents the study area, county, and state population trends. Generally, the county and study area experienced decreases in population from 2010 to 2017, while the state experienced a modest increase of nearly 6% during this period.

Table 4.3-1. Population Trends

Geographic Area		2010 Census	Total Population (2017 Est.)	Change (+/-)	% Change
CT 9202	BG 1	1,117	974	-143	-12.8%
	BG 2	1,248	1,131	-117	-9.4%
	BG 3	1,090	939	-151	-13.9%
	BG 4	1,411	1,601	190	13.5%
CT 9203.02	BG 2	1,054	689	-365	-34.6%
	BG 3	2,701	2,356	-345	-12.8%
	BG 4	909	1,217	308	33.9%
Study Area*		6,057	5,452	-605	-10.0%
Bishopville		3,471	3,229	-242	-7.0%
Lee County		19,220	17,897	-1,323	-6.9%
South Carolina		4,625,364	4,893,444	268,080	5.8%

Source: US Census Bureau. (2010). *Decennial Census*. Retrieved from https://www.census.gov/programs-surveys/decennial-census/data/tables.2010.html.
US Census Bureau. (2017). *American Community Survey (ACS) 5-Year Estimates*. Retrieved from https://data.census.gov/cedsci.
*Study Area Source: EPA. (2020). *EJSCREEN: Environmental Justice Screening and Mapping Tool*. Retrieved July 2020 from https://ejscreen.epa.gov/mapper.

Race and Ethnicity

The study area and surrounding region are more diverse than the state. Most of the population in the study area, block groups (35% to 83%), city (72%), and county (63%) identify as Black or African American, while the majority (64%) identify as White in the state. Race and ethnicity characteristics for the study area (as available), block groups, city, county, and the state are in **Table 4.3-2**.

Minority populations include American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian or Other Pacific Islander (**Figure 4.3-3**). The three block groups in the study area with the highest minority populations are CT 9203.02, BG 4, CT 9202, BG 4, and CT 9203.02, BG 3. The minority population percentage of the block groups (40% - 88%), Bishopville (76%), and Lee County (67%) is higher than South Carolina (36%). Minority populations for the block groups, Bishopville, Lee County, and South Carolina are presented in **Table 4.3-3**.

Table 4.3-2. Population by Race and Ethnicity

Geographic Area		American Indian and Alaska Native	Asian	Black or African American	Hispanic or Latino	Native Hawaiian and Other Pacific Islander	White	Other Race	Two or More Races
CT 9202	BG 1	0.0%	0.0%	35.2%	5.1%	0.0%	59.7%	5.1%	0.0%
	BG 2	0.0%	0.5%	38.8%	0.0%	0.0%	56.8%	0.0%	3.9%
	BG 3	0.0%	0.0%	55.2%	0.0%	0.0%	43.0%	0.6%	1.2%
	BG 4	0.0%	0.0%	75.3%	6.1%	0.0%	18.6%	0.0%	0.0%
CT 9203.2	BG 2	0.0%	0.0%	78.2%	0.0%	0.0%	21.8%	0.0%	0.0%
	BG 3	0.3%	0.0%	75.8%	2.4%	0.0%	20.4%	0.0%	1.0%
	BG 4	0.0%	0.0%	83.2%	4.5%	0.0%	12.2%	0.0%	0.0%
Study Area*		0.1%	0.1%	73.1%	3.0%	0.0%	23.2%	0.0%	0.7%
Bishopville		0.0%	0.0%	71.9%	3.6%	0.0%	24.5%	0.0%	0.0%
Lee County		0.4%	0.0%	62.6%	2.3%	0.0%	32.6%	0.0%	2.0%
South Carolina		0.3%	1.5%	27.0%	5.5%	0.1%	63.8%	0.2%	1.8%

Source: US Census Bureau. (2017). *ACS 5-Year Estimates*. Retrieved from https://data.census.gov/cedsci.
*Study Area Source: EPA. (2020). *EJSCREEN: Environmental Justice Screening and Mapping Tool*. Retrieved July 2020 from https://ejscreen.epa.gov/mapper.

Table 4.3-3. Minority Population

Geographic Area		Total Population	Minority Population	% Minority
CT 9202	BG 1	974	443	45.5%
	BG 2	1,131	489	43.2%
	BG 3	939	535	57.0%
	BG 4	1,601	1,303	81.4%
CT 9203.2	BG 2	689	539	78.2%
	BG 3	2,356	1,875	79.6%
	BG 4	1,217	1,068	87.8%
Study Area*		5,452	4,189	76.8%
Bishopville		3,229	2,438	75.5%
Lee County		17,897	12,056	67.4%
South Carolina		4,893,444	1,773,768	36.2%

Source: US Census Bureau. (2017). *ACS 5-Year Estimates*. Retrieved from https://data.census.gov/cedsci.
*Study Area Source: EPA. (2020). *EJSCREEN: Environmental Justice Screening and Mapping Tool*. Retrieved July 2020 from https://ejscreen.epa.gov/mapper.

Age and Gender

Age and gender data shown in **Table 4.3-4** indicates that the median age for the city (33.8 years) is below both the median age for the county (41.7 years) and the state (39.0 years). Three block groups (CT 9202, BG 1, CT 9202, BG 3, and CT 9202, BG 4) have higher 65+ populations than Lee County (17%) and South Carolina (16%).

Elderly individuals are more likely to face specific challenges such as health care, social isolation, limited mobility, and fixed incomes. Due to their limitations, the elderly population is considered more vulnerable. The study area has a population of 15% over the age of 65. This is slightly below the population of 65 years and older for the city and county (about 17%) and the state (about 16%). The McCoy Memorial Nursing Center is an adult living center located in the study area.

Table 4.3-4. Age and Gender

Geographic Area		0 - 17 Years	18 - 64 Years	65+ Years	Median Age	Gender	
						Male	Female
CT 9202	BG 1	14.1%	63.5%	22.4%	51.0	57.9%	42.1%
	BG 2	16.8%	69.1%	14.1%	42.7	48.5%	51.5%
	BG 3	14.0%	56.1%	29.9%	48.9	41.3%	58.7%
	BG 4	33.4%	46.2%	20.4%	30.3	45.5%	54.6%
CT 9203.2	BG 2	21.6%	65.3%	13.1%	32.7	37.2%	62.8%
	BG 3	8.7%	83.7%	7.6%	34.8	82.9%	17.1%
	BG 4	34.4%	54.6%	11.0%	34.6	39.4%	60.6%
Study Area*		19.0%	66.0%	15.0%	--	61.0%	39.0%
Bishopville		28.1%	54.7%	17.2%	33.8	43.5%	56.5%
Lee County		21.3%	61.9%	16.8%	41.7	51.7%	48.3%
South Carolina		22.3%	61.4%	16.3%	39.0	48.6%	51.4%

Source: US Census Bureau. (2017). *ACS 5-Year Estimates*. Retrieved from https://data.census.gov/cedsci.
*Study Area Source: EPA. (2020). *EJSCREEN: Environmental Justice Screening and Mapping Tool*. Retrieved July 2020 from https://ejscreen.epa.gov/mapper.
Note: Median Age not available for the Study Area.

Income and Household Characteristics

Table 4.3-5 includes income and household characteristics. The median household income for all block groups, Bishopville ($20,565), and the county ($31,963) are below the median household income for the state ($48,781). The median house value for all block groups, the city ($33,900), and the county ($69,800) is well below the state median house value ($148,600).

Lee County has a slightly higher percentage of owner-occupied housing at 74.8% compared to the state at 68.6%. The city had a lower percentage of owner-occupied housing compared to the State at 40.3%. The study area had an owner-occupied housing of 55.4%, which is greater than the city (40.3%) but less than the county (74.8%) and the state (68.6%).

Table 4.3-5. Income and Household Characteristics

Geographic Area		Median Household Income	Median House Value	Owner-Occupied Housing	Total Households
CT 9202	BG 1	$36,047	$69,100	88.4%	--
	BG 2	$38,224	$63,300	91.9%	--
	BG 3	$27,500	$112,500	81.8%	--
	BG 4	$12,279	$56,000	18.8%	--
CT 9203.02	BG 2	--	$58,500	38.8%	--
	BG 3	$27,083	$73,700	57.6%	--
	BG 4	$38,382	$68,100	66.6%	--
Study Area*		--	--	48.0%	1,523
Bishopville		$20,565	$33,900	40.3%	1,170
Lee County		$31,963	$69,800	74.8%	6,501
South Carolina		$48,781	$148,600	68.6%	1,871,307

Source: US Census Bureau. (2017). *ACS 5-Year Estimates*. Retrieved from https://data.census.gov/cedsci.
*Study Area Source: EPA. (2020). *EJSCREEN: Environmental Justice Screening and Mapping Tool*. Retrieved July 2020 from https://ejscreen.epa.gov/mapper/Employment.

Employment

According to the South Carolina Department of Employment and Workforce (SCDEW), Lee County's employment totaled 6,284 in 2018. The unemployment rate was 4.6%, which steadily decreased over the last eight years from 16.2% in 2010. Employment has fluctuated since 1970, bottoming at 5,007 in 1986 before peaking at 7,368 in 2008. Lee County's share of regional employment decreased from 6.6% in 1970 to 4.7% in 2016 and is forecasted to continue decreasing, which suggests Lee County's share of the regional economy will continue to decline. **Exhibit 4-3** illustrates historical and projected regional employment trends.

According to the SCDEW (July 2020), Lee County had an unemployment rate of 5.1% in March 2020, which doubled to 11.1% by July 2020. South Carolina's unemployment rate increased from 3.0% in March 2020 to 8.9% in July 2020.

According to the SCDEW's *Quarterly Census of Employment and Wages - 2019 Q4*, the top two employment industries for Lee County are Public Administration and Healthcare and Social Assistance. Employment and average annual wages in Lee County for the fourth quarter of 2019 are shown in **Table 4.3-6**. Ardagh Metal Beverage USA Inc., Carlyle Senior Care of Bishopville, Food Lion LLC, and Red Classic Transit LLC are four of Lee County's largest employers.

Exhibit 4-3. Historical and Projected Regional Employment Trends

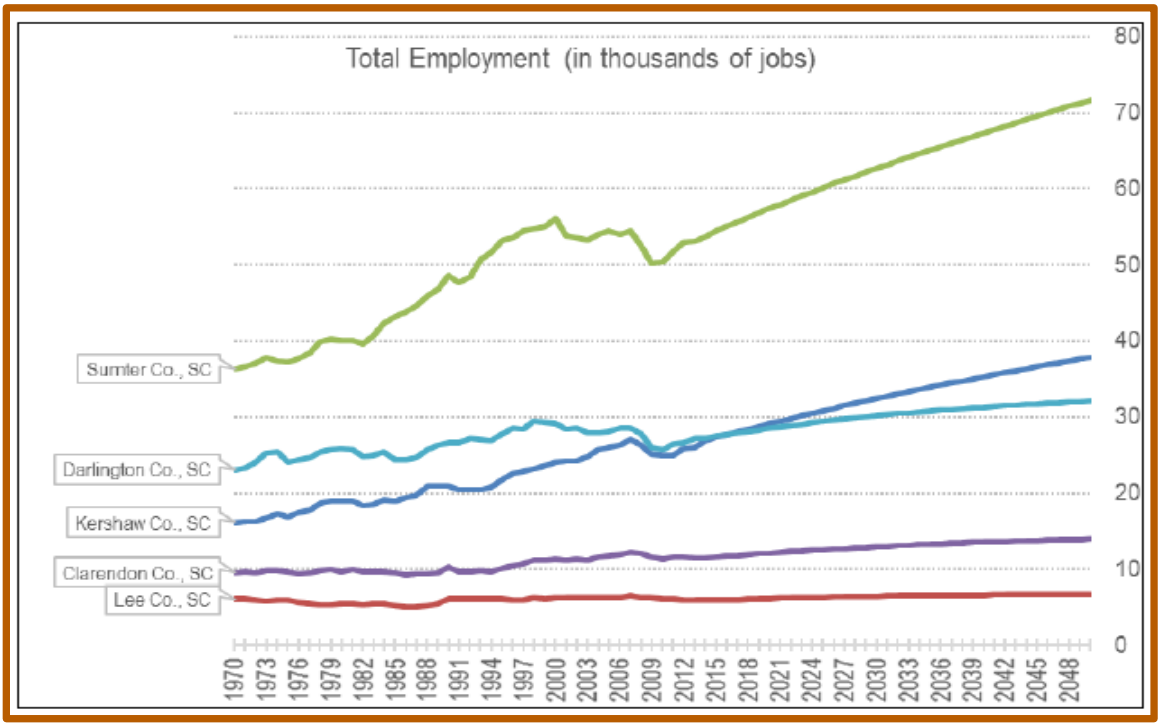


Table 4.3-6. Employment and Average Annual Wage in Lee County (2019 Q4)

Industry	Employment	Average Annual Wage
Accommodations and Food Services	298	$13,676
Administrative & Support & Waste Management & Remediation Services	167	$45,604
Agriculture, Forestry, Fishing, and Hunting	89	$33,696
Construction	55	$36,712
Educational Services	400	$35,256
Finance and Insurance	60	$35,412
Health Care and Social Assistance	562	$49,140
Manufacturing	394	$59,124
Other Services (except Public Administration)	267	$22,984
Professional, Scientific, and Technical Services	88	$56,316
Public Administration	640	$38,636
Retail Trade	400	$24,284
Transportation and Warehousing	208	$46,332
Accommodations and Food Services	81	$63,180

Source: SCDEW. (2019). *Quarterly Census of Employment and Wages (QCEW) - 2019 Q4.*

4.3.2.2 Community Resources

The City of Bishopville and Lee County offer residents a variety of activities that promote cohesion in the community. Community cohesion is the degree to which residents have a sense of belonging to their neighborhood or community.

Downtown is a part of Bishopville's culture that provides an economic locality and social function in the community. There is a mix of retail shops and public amenities, including churches, the Lee County Public Library, Flag Park, and the South Carolina Cotton Museum. The City of Bishopville, TheLINK Economic Development Alliance, the Lee County Chamber of Commerce, and other partners are committed to promoting economic and community development activities to encourage the revitalization of downtown along Main Street (US 15). The Bishopville Commercial Historic District is a national historic district that encompasses 48 contributing buildings in Bishopville's central business district. There has been an ongoing effort to attract new retail businesses and industries consistent with the historic character of the area.

Community resources shown in **Figure 4.3-5a-5d** include churches and cemeteries, parks and recreational sites, schools, health care facilities; and fire, police, and other government services. More information can be found in the *Bishopville Truck Route Project Community Impact Assessment* (2021), which is located in **Appendix F**, and the *Bishopville Truck Route Project Environmental Justice Assessment* (2021), which is located in **Appendix G**.

Schools

Educational resources located in the study area include four of the six public schools in Lee County: Dennis Elementary School, Lee Central Middle School, Lee Central High School, and Lee County Career and Technology Center. Lee Academy (formerly known as Robert E. Lee Academy) is a private school for kindergarten through 12th grade and is located in the study area on Cousar Street.

Places of Worship

There are 19 places of worship in the study area, however, none of them are located in or adjacent to the footprints of the build alternatives.

Recreational

There are 11 public parks and recreational areas in the study area. Ten of which are maintained and operated by Lee County, and one of which (Lee State Park) is maintained and operated by the state. All 11 resources are protected under *Section 4(f) of the USDOT Act of 1996*, as amended. *Section 4(f)* "established the requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development."

Recreational parks and open spaces offer a place for the community to participate in recreational activities and social gatherings. Recreational programs include a variety of youth, adult, and senior sports and programs. Lee State Park offers a variety of amenities including fishing and boating, hiking and horseback trails, picnic and camping facilities, and an education center.

The *Land and Water Conservation Fund (LWCF) Act of 1965* established funding to provide matching grant assistance to states and local governments for the planning, acquisition, and development of outdoor public recreation sites and facilities. *Section 6(f)(3) of the LWCF* requires that properties using *LWCF* funding must be maintained as public recreational facilities in perpetuity. There are two *Section 6(f)* resources located in the project study area: Lee State Park and M.M. Levy Park, but neither is located in or adjacent to the footprints of the build alternatives.

Government Services

The study area includes numerous government offices and services, including City Hall, police and fire departments, the public library, post office, and social services. None of them are located in or adjacent to the footprints of the build alternatives.

Medical Facilities

No general hospital is located in the study area or Lee County. The closest hospital to Bishopville is located in Hartsville less than 20 miles to the north. The ALPHA Behavioral Health Center and the Gibbs Activity Center are private facilities located in the study area, but they are not located in or adjacent to the footprints of the build alternatives.

Civic Resources

There are five civic resources located in the study area including the Lee County Veterans Museum, South Carolina Cotton Museum, and the Pearl Fryar Topiary Garden. However, none of them are located in or adjacent to the footprints of the build alternatives.

4.3.3 What are the potential impacts of the project?

Bishopville is a rural community with geographically large block groups, and GIS data at the neighborhood level is not available. Therefore, "residential areas" were identified to assist with the analysis of potential impacts of the project on smaller areas (or "microcommunities") of the Bishopville community. These residential areas, which are described below, were determined based on parcel boundaries, field visits, and discussions with residents (**Figure 4.3-2a-2d**).

Lucknow

Existing Conditions

This area consists of single-family homes on larger parcels of land, with several mobile homes located along Hunters Glen Lane. The block group has a minority population of about 40% and a low-income population of about 8%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Tim's Drive

Existing Conditions

This area consists of predominantly mobile homes. The block group has a minority population of about 40% and a low-income population of about 8%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Broad Acres

Existing Conditions

This area includes Broad Acres Road and Piedmont Road. The area has a moderate mix of single-family and mobile homes, located mostly along Piedmont Road. The area is in a block group with a minority population of about 56%, a low-income population of about 15%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Calhoun

Existing Conditions

This area is a mix of single-family homes and mobile homes along McIntosh Street, Quinn Street, and Morgans Alley. The area is in a block group with a minority population of about 56% and a low-income population of about 15%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Julia Drive

Existing Conditions

This area consists of households along Julia Drive and a few surrounding properties along W. Church Street (SC 34). This block group has a minority population of about 81% and a low-income population of about 63%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Roland Street

Existing Conditions

This area is a mix of older single-family and mobile homes and in a block group with a minority population of about 81% and a low-income population of about 63%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Dennis Avenue

Existing Conditions

This area is a mix of single-family homes and mobile homes and is in a block group with a minority population of about 81% and a low-income population of about 63%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Price Lane

Existing Conditions

This area consists of mostly mobile homes and is in a block group with a minority population of about 78% and a low-income population of about 44%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Dixon Drive

Existing Conditions

This area consists of mostly single-family homes, but also contains a few mobile homes. The area is in a block group with a minority population of about 78% and a low-income population of about 44%. Lynches River Apartments is located off Academy Road.

Potential Impacts

Based on the land use and predicted noise levels (2045), the No-Build Alternative would result in two noise impacts located along Main Street (US 15): one Noise Abatement Criteria (NAC) Category B (residential) receiver and one NAC Category E (hotels, motels, offices, restaurants/bars) receiver.

All build alternatives would have accessibility impacts such as permanent or temporary driveway relocations and/or temporary detours. Alternatives 1, 7, 9, and 11 would result in residential relocations. All build alternatives would have visual character impacts resulting from the proximity of the proposed alternatives to existing residences and potential relocations for Alternatives 1, 7, 9, and 11. All build alternatives would have temporary construction-related impacts such as lane closures and/or temporary detours and construction noise.

Davis Street

Existing Conditions

This area is a dense mix of older single-family homes and mobile homes and is in a block group with a minority population of about 78% and a low-income population of about 44%.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

James Street

Existing Conditions

This area is located on the outskirts of Bishopville. The block group has a minority population of about 78% and a low-income population of about 44%.

Potential Impacts

All build alternatives would have visual character impacts resulting from the proximity of the build alternatives to existing residences. All build alternatives would have temporary construction-related impacts such as lane closures and/or temporary detours and construction noise.

Wags Drive

Existing Conditions

This area includes homes along Wags Drive and a few surrounding single-family homes on Wisacky Highway (SC 341). Wags Drive consists of a mix of mobile homes and small single-family homes. The block group has a minority population of about 78% and a low-income population of about 44%.

Potential Impacts

All build alternatives would have accessibility impacts such as permanent or temporary driveway relocations and/or temporary detours. All build alternatives would have visual character impacts resulting from the proximity of the proposed alternatives to existing residences.

All build alternatives would have temporary construction-related impacts such as lane closures and/or temporary detours and construction noise. These potential impacts would mostly be near the intersection/tie-in of the proposed roadway and Wisacky Highway (SC 341).

Bradley Avenue

Existing Conditions

This area consists of a mix of housing. The block group has a minority population of about 80% and a low-income population of about 30%. The Lee Correctional Institution is located in the southeastern corner of this block group.

Potential Impacts

No direct impacts are anticipated with any of the build alternatives.

Magnolia Drive

Existing Conditions

This area is a mix of housing. Three housing apartment complexes (Cloverleaf Apartments, Ivy Terrace Apartments, and Spring Garden Apartments) are located on S. Lee Street. Smaller single-family homes are concentrated along S. Lee Street, Maple Drive, and St. Charles Road (SC 154). The block group has a minority population of about 80% and a low-income population of about 30%. The Lee Correctional Institution is located in the southeastern corner of this block group.

Potential Impacts

Alternatives 2, 7, and 8 would have accessibility impacts such as permanent or temporary driveway relocations and/or temporary detours. Alternatives 2, 7, and 8 would have visual character impacts resulting from the proximity of these build alternatives to existing residences in the southern portion of the Magnolia Drive residential area. Alternatives 2, 7, and 8 would have temporary construction-related impacts such as lane closures and/or temporary detours and construction noise. These potential impacts would mostly be near the intersection of the proposed tie-in on St. Charles Road (SC 154) with Maple Drive.

Edgefield Drive

Existing Conditions

This area consists of homes located along St. Charles Road (SC 154) and Edgefield Drive. The block group has a minority population of about 88% and a low-income population of about 25%.

Potential Impacts

Alternatives 3, 4, 9, 10, 11, and 12 would have accessibility impacts such as permanent or temporary driveway relocations and/or temporary detours. Alternatives 3, 4, 9, 10, 11, and 12 would result in residential relocations. Alternatives 3, 9, and 10 would have community cohesion impacts due to the division of existing residences along Edgefield Drive by the proposed roadway.

Alternatives 2, 3, 4, 7, 8, 9, 10, 11, and 12 would have visual character impacts resulting from the proximity of these build alternatives to existing residences along Edgefield Drive and potential relocations for Alternatives 3, 4, 9, 10, 11, and 12.

Alternatives 2, 3, 4, 7, 8, 9, 10, 11, and 12 would have temporary construction-related impacts such as lane closures and/or temporary detours and construction noise. Currently, Wilkinson Road and a large, undeveloped parcel separate the residences along Edgefield Drive and St. Charles Road (SC 154). Access for these residences will operate as current conditions allow.

Table 4.3-7 summarizes potential impacts by residential area. More detailed information about potential community impacts can be found in the *Bishopville Truck Route Project Community Impact Assessment* (2021), which can be found in **Appendix F**.

Table 4.3-7. Potential Impacts on Residential Areas

Potential Impacts by Alternative														
Residential Area	Potential Impact	No-Build	1	2	3	4	5	6 (PA)	7	8	9	10	11	12
Dixon Drive	Accessibility	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Relocations	N	Y	N	N	N	N	N	Y	N	Y	N	Y	N
	Community Cohesion	N	N	N	N	N	N	N	N	N	N	N	N	N
	Community Resources	N	N	N	N	N	N	N	N	N	N	N	N	N
	Visual Character	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Noise	Y	N	N	N	N	N	N	N	N	N	N	N	N
	Construction	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
James Street	Accessibility	N	N	N	N	N	N	N	N	N	N	N	N	N
	Relocations	N	N	N	N	N	N	N	N	N	N	N	N	N
	Community Cohesion	N	N	N	N	N	N	N	N	N	N	N	N	N
	Community Resources	N	N	N	N	N	N	N	N	N	N	N	N	N
	Visual Character	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Noise	N	N	N	N	N	N	N	N	N	N	N	N	N
	Construction	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note: Construction impacts include temporary construction noise from on-site construction and off-site staging areas.

Residential Area	Potential Impact	No-Build	1	2	3	4	5	6 (PA)	7	8	9	10	11	12
Wags Drive	Accessibility	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Relocations	N	N	N	N	N	N	N	N	N	N	N	N	N
	Community Cohesion	N	N	N	N	N	N	N	N	N	N	N	N	N
	Community Resources	N	N	N	N	N	N	N	N	N	N	N	N	N
	Visual Character	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Noise	N	N	N	N	N	N	N	N	N	N	N	N	N
	Construction	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Magnolia Drive	Accessibility	N	N	Y	N	N	N	N	Y	Y	N	N	N	N
	Relocations	N	N	N	N	N	N	N	N	N	N	N	N	N
	Community Cohesion	N	N	N	N	N	N	N	N	N	N	N	N	N
	Community Resources	N	N	N	N	N	N	N	N	N	N	N	N	N
	Visual Character	N	N	Y	N	N	N	N	Y	Y	N	N	N	N
	Noise	N	N	N	N	N	N	N	N	N	N	N	N	N
	Construction	N	N	Y	N	N	N	N	Y	Y	N	N	N	N
Edgefield Drive	Accessibility	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y
	Relocations	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y
	Community Cohesion	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y
	Community Resources	N	N	N	N	N	N	N	N	N	N	N	N	N
	Visual Character	N	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y
	Noise	N	N	N	N	N	N	N	N	N	N	N	N	N
	Construction	N	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y

Note: Construction impacts include temporary construction noise from on-site construction and off-site staging areas.

4.3.3.1 Mobility and Access

No-Build Alternative
The No-Build Alternative would likely adversely impact mobility and access with increased congestion and a continued increase in truck traffic downtown.

Build Alternatives
Project construction would have accessibility impacts such as permanent or temporary driveway relocations and/or temporary detours. No long-term adverse impacts on accessibility are anticipated.

The proposed project would have a beneficial effect on mobility and access in the project vicinity as a result of improving truck and automobile access to businesses, public services, and other services in the area. The project could reduce travel times for residents to existing employment centers, commercial and retail areas, thereby improving mobility and access for residents and travelers. In addition, the proposed project would provide enhanced access to areas around I-20 where economic development initiatives are focused.

4.3.3.2 Relocations and Displacements

No-Build Alternative
The No-Build Alternative would not require any property acquisition or relocations.

Build Alternatives
Eight of the build alternatives would likely result in residential and/or commercial relocations. The number of relocations ranges from zero to eight, as shown in **Table 4.3-8**. Alternatives 9 and 11 would require the most relocations (seven and eight, respectively), and Alternatives 2, 5, 6 (Preferred Alternative), and 8 would not require any relocations.

The residential relocations would be single-family homes, and commercial relocations would be mostly small businesses typical of those in the community, with one larger commercial site used for storage. The anticipated business relocations are located along Sumter Highway/Main Street (US 15). Long-term disruption to the surrounding community is not anticipated.

The SCDOT will conduct the relocation process in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (URA),* as amended, should the proposed project require design modifications that would result in relocations. The *URA* was enacted to "ensure that people whose real property is acquired, or who move as a result of projects receiving federal funds, will be treated fairly and equitably and will receive assistance in moving from the property they occupy."

Table 4.3-8. Potential Relocations by Alternative

Impacts	Alternative												
	No-Build	1	2	3	4	5	6 (PA)	7	8	9	10	11	12
Residential (#)	0	1	0	3	3	0	0	1	0	4	3	4	3
Commercial (#)	0	3	0	0	1	0	0	3	0	3	0	4	1
Total	**0**	**4**	**0**	**3**	**4**	**0**	**0**	**4**	**0**	**7**	**3**	**8**	**4**

Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

4.3.3.3 Community Cohesion

No-Build Alternative
The No-Build Alternative would have no potential impacts on community cohesion.

Build Alternatives
Community cohesion is the degree to which residents have a sense of belonging to their neighborhood or community, including a commitment to the community or level of attachment to neighbors, institutions in the community, or subgroups. Community cohesion includes the degree of social networking in a community, including the degree to which residents cooperate and interact. Transportation projects can impact community cohesion by bisecting neighborhoods, isolating a portion of a neighborhood, and/or creating barriers.

Alternatives 3, 9, and 10 have the potential to impact the community cohesion of the Edgefield Drive residential area because they bisect the existing residences along Edgefield Drive. As shown in **Table 4.3-7**, Alternatives 3, 4, 9, 10, 11, and 12 have the potential for accessibility and visual character impacts on the Edgefield Drive residential area due to the proximity of the build alternatives to existing residences and the potential residential relocations.

Aside from localized impacts on the Edgefield Drive residential area, the overall project is not anticipated to result in long-term adverse impacts on community cohesion within these communities. The new location roadway would not physically create barriers to access, move within, or between these communities; nor would the project prohibit access to community resources (e.g., schools, places of worship, etc.).

4.3.3.4 Community Resources

No-Build Alternative
The No-Build Alternative would have no potential impacts on community resources.

Build Alternatives
Community resources and services would experience temporary adverse effects during project construction, including temporary changes in access to some resources and services during construction. However, no long-term adverse impacts are anticipated.

4.3.3.5 Visual Impact Assessment

No-Build Alternative
The No-Build Alternative would likely continue to adversely impact the visual character of downtown Bishopville as a result of increased truck traffic.

Build Alternatives
SCDOT completed a Visual Impact Assessment (VIA) scoping questionnaire following FHWA's *Guidelines for the Visual Impact Assessment of Highway Projects* (2015) for Alternative 6 (Preferred Alternative). SCDOT used the VIA scoping questionnaire to assess the potential visual impacts of the proposed project and to assess the degree and breadth of the potential impacts. The project team completed the VIA scoping questionnaire using knowledge of the area, available information, and professional judgment to determine the appropriate level of VIA documentation.

The *Bishopville Truck Route Project Abbreviated Visual Impact Assessment* (2021), which can be found in **Appendix H**, was prepared because a moderate level of permanent visual change is anticipated and because the project is moderately compatible with the community's visual character.

The Area of Visual Effect (AVE) is the area in which views of the project would potentially be visible as influenced by the presence or absence of intervening topography, vegetation, and structures. The AVE consists of a 1,000-foot buffer around the proposed project.

Visual impacts from the Preferred Alternative were determined by assessing the change in visual resources caused by the proposed project and by assessing the viewer's response to that change. To assess the visual resource change, the visual compatibility and visual contrast of the project with the visual character of the existing landscape were examined. To assess viewer response, viewer exposure and viewer sensitivity were considered. Viewer exposure considers the physical limits of the views and the number of affected viewers. Viewer sensitivity considers viewer expectations based on the existing environment and the extent to which visual elements may be important to the viewer.

The Preferred Alternative would result in both short-term and long-term visual impacts. Short-term impacts include disruptions during construction while long-term impacts are the result of permanent alterations that change the way people commute in and around the area. Short-term construction impacts may include detours, localized congestion in and around the area, the presence of large equipment, construction staging areas, dust from construction, and disruption to surrounding residences and businesses. While construction activities would have a direct effect on visual resources in the project corridor, the duration of these impacts would be temporary.

Long-term impacts from the Preferred Alternative would include new intersections and modified existing intersections, new right-of-way, and changes to the surrounding landscape through the presence of new pavement, bridges, and culverts. The design of the highway will be curvilinear and will generally follow the existing grade, which primarily consists of low-lying, flat terrain. The illustrations shown in **Exhibit 4-4** were developed based on a 93-foot corridor, which consists of the proposed 43-foot typical section (two 12-foot travel lanes, a 15-foot two-way left-turn lane, and 4-foot paved shoulders) and a 25-foot buffer on each side. The illustrations are for visualization purposes only and are subject to change. The location, width, and lane configuration of the proposed roadway, intersections, and connections will be determined during final design.

The Preferred Alternative has the potential to detract from existing visually pleasing views of rural and natural areas afforded to residents and users of property adjacent to the proposed project. There may be visual impacts on the businesses and residences located along Dixon Drive and at the proposed intersection with Main Street (US 15) due to the proximity of the proposed project. The proposed connection to Academy Road intersects a vacant field between the Lynches River Apartments and a single-family residence. Visual impacts in this area are expected to be minimal because the connection would not be used by all vehicular traffic. There is also an existing hedgerow adjacent to the Lynches River Apartments (approximately 125 feet from the proposed connection) that would mostly obstruct the view of the proposed roadway from the residences.

As seen in **Table 4.3-7**, changes to visual characteristics are likely to occur for the James Street and Wags Drive residential areas as well. This is due to the proximity of the Preferred Alternative to the viewshed of existing residences and the conversion of rural/vacant land to transportation uses. Out of these three residential areas, Dixon Drive is expected to have the most change in visual character due to the new intersection at Main Street (US 15), the permanent closure of an existing portion of Dixon Drive, and the connection alignment to Academy Road.

The Preferred Alternative would directly alter daily viewer experiences (residential, business patrons, and other travelers) in the area. However, individual visual resources and the overall rural visual character are not anticipated to be substantively altered as a result of the project. The Preferred Alternative is similar to existing roadways in the project study area and is expected to blend with the existing terrain. Furthermore, although downtown Bishopville is not located in the AVE, reducing truck traffic downtown is expected to improve the overall aesthetics of the downtown area. More information on potential visual impacts can be found in the *Bishopville Truck Route Project Abbreviated Visual Impact Assessment* (2021), which is located in **Appendix H**.

While a VIA was not completed for the other build alternatives, a desktop survey was completed to determine general conclusions regarding potential changes in visual character. Overall, build alternatives that would have a higher number of residential areas exposed to the roadway would have a greater degree of visual impact. However, due to the low potential for relocations, substantive changes in visual character are not anticipated as a result of the project.

As seen in **Table 4.3-7**, changes to the visual characteristics are likely to occur in the Edgefield Drive residential area for Alternatives 3, 4, 9, 10, 11, and 12. Alternatives 3, 9, and 10 will divide the residences along Edgefield Drive. There are two single-family residential properties along Edgefield Drive that will potentially require relocation based on alignments for Alternatives 3, 9, and 10. Alternatives 4, 11, and 12 will cross the middle portion of the Edgefield Drive residential area along the existing alignment of Wilkinson Road. There are two single-family residential properties along Wilkinson Road that will potentially require relocation based on the alignments for Alternatives 4, 11, and 12. Either of these actions from each group of build alternatives will likely result in a visual impact for the other single-family residences along Edgefield Drive.

Changes to visual characteristics are also likely to occur in the Dixon Drive residential area for all build alternatives. Alternatives 1, 7, 9, and 11 propose an alignment through the northern section of the residential area, and likely result in two relocations (one residential and one commercial) in the residential area that could alter the visual aesthetics. Alternatives 2, 3, 4, 5, 8, 10, and 12 propose alignments along Dixon Drive and a connection to Academy Road. The proposed connection would divide the Lynches River Apartments from two single-family residences on Academy Road.

Residents in the James Street and Wags Drive residential areas could experience minor visual impacts because of the proximity of all build alternatives to their eastern sides (roughly 300 feet for Alternatives 2, 3, 4, 5, 8, 10, and 12 at James Street, 500 feet for Alternatives 1, 7, 9, and 11 at James Street, and 350 feet for all build alternatives at Wags Drive). Improvements are proposed at the intersection of each build alternative and Wisacky Highway (SC 341); adjoining the Wags Drive residential area.

Residents in the Edgefield Drive and Magnolia Drive residential areas may incur minor visual impacts because of the proximity of Alternatives 2, 7, and 8 to their southern sides (roughly 350 feet at Edgefield Drive and 150 feet at Magnolia Drive). Improvements are proposed at the intersection of Alternatives 2, 7, and 8 and St. Charles Road (SC 154); adjoining the Magnolia Drive residential area. The topography in the majority of the project area consists primarily of low-lying, flat-terrain, which are common land characteristics for agricultural production. The addition of a new roadway in the vicinity will be visually recognizable from the sections of residential areas that lack a tree buffer.

Exhibit 4-4. Potential Visual Effects of the Preferred Alternative

Note: Illustrations are for visualization purposes only and are subject to change.

4.3.3.6 Noise

No-Build Alternative
Traffic noise impacts occur when the predicted traffic noise levels either approach (within 1-dBA of the Noise Abatement Criteria [NAC] for each land use category) or exceed the NAC, or when the predicted noise levels substantially exceed the existing noise levels. According to the *SCDOT Traffic Noise Abatement Policy*, a 15-dBA or greater increase is deemed to be a "substantial increase". Noise abatement measures must be considered for receivers that fall in either category.

Based on the land use category and predicted noise levels (2045), the No-Build Alternative would result in two noise impacts: one NAC Category B (residential) receiver and one NAC Category E (hotels, motels, offices, restaurants/bars) receiver that are both located along Main Street (US 15).

Build Alternatives
A temporary increase in noise levels is anticipated during the construction phase for all build alternatives, but no long-term traffic noise impacts are anticipated. **Section 4.4** provides more detail on the traffic noise analysis.

4.3.3.7 Land Use

No-Build Alternative
The No-Build Alternative would have no potential impacts on land use.

Build Alternatives
As discussed in **Section 4.1.3**, all 12 build alternatives would require the direct conversion of existing non-transportation land uses to transportation use. The build alternative impacts on land use range from 53.4 to 64.0 acres. Overall, the most anticipated impacts are to agricultural/rural land in the study area as a result of acquiring the right-of-way needed for the project. The majority of the impacted land is located in the Development Holding District.

4.3.3.8 Economics

No-Build Alternative
As compared to the build alternatives, the No-Build Alternative would result in increased truck traffic downtown and would not be consistent with plans to enhance the economic vitality of the area, which would result in the following adverse effects:

- Loss of potential short-term benefits including increased employment and earnings;
- Loss of potential long-term benefits including increased economic activity associated with increased spending in the short- and long-term due to the additional jobs and earnings;
- Loss of potential for long-term indirect and cumulative economic benefits of downtown revitalization initiatives; and
- Loss of potential for long-term economic benefits associated with increased access to commercial/industrial property and enhanced connectivity to the statewide highway network.

Build Alternatives
The potential short-term adverse effects from all 12 build alternatives include adverse effects on some businesses as a result of reduced or altered access during construction. The potential long-term adverse effects of diverting truck traffic include the loss of revenue for businesses downtown from truck drivers stopping for food, gas, and/or other retail needs.

The potential beneficial direct and indirect economic effects from all 12 build alternatives include increased short-term employment during construction, increased short-term retail spending on food, clothing, and/or other services in the area during construction, and increased spending and tax revenue in the long term. This is because construction of the build alternatives would facilitate economic redevelopment initiatives in the Redevelopment District downtown and facilitate development initiatives in the Development Holding District. Additional discussion of the potential economic impacts of the project can be found in the *Bishopville Truck Route Project Economic Development Report* (2021), which is located in **Appendix I**.

4.3.3.9 Construction Impacts

No-Build Alternative

The project would not be constructed under the No-Build Alternative. Therefore, the No-Build Alternative would not result in any construction-related impacts.

Build Alternatives

Construction impacts are anticipated for all twelve build alternatives. Typical construction impacts include dust, noise and vibration, traffic disruption, congestion, and diversion as well as a limited or temporary reduction in access for businesses. Potential air quality impacts could occur due to the dust and fumes from equipment, earthwork activities, and vehicles accessing the construction site. The sound levels resulting from construction activities at nearby residences will be a function of the types of equipment used, the duration of the activities, and the distances between construction activities and nearby land use. Temporary detours and road closures may increase travel times, fuel use, and air pollutant emissions. Local areas may experience temporary disruptions to access, resulting in longer commute times and a potential short-term economic impact on some businesses.

4.3.3.10 Environmental Justice Analysis

"Environmental Justice" (EJ) is the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, income, national origin, or educational level, for the development, implementation, and enforcement of environmental laws, regulations, and policies. For the United States Department of Transportation (DOT) Environmental Justice Strategy, fair treatment means that **no population, due to policy or economic disempowerment, is forced to bear a disproportionate burden of the negative human health and environmental impacts, including social and economic effects, resulting from transportation decisions, programs and policies made, implemented and enforced at the federal, state, local, or tribal level** (USDOT, 2021).

EJ populations are communities of minority and/or low-income populations. Minority populations include Black or African American, Hispanic, Asian American, American Indian/Alaskan Native, and Native Hawaiian or Pacific Islander. Low-income populations can be of any race or ethnicity.

EJ analysis focuses on identifying and addressing disproportionately high and adverse human health or environmental effects of the project activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens. This objective is to be achieved, in part, by actively adhering to the principles and practices of *Title VI of the Civil Rights Act of 1964* and *Executive Order (EO) 12898: Federal Actions to Address Environmental Justice on Minority Populations and Low-Income Populations* during the development and implementation of transportation activities. For more information, the *Bishopville Truck Route Project Environmental Justice Assessment* (2021) can be found in **Appendix G**.

United States Department of Transportation Order 5610.2(c): Department Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (2021) updated EJ procedures for the DOT in response to the *Memorandum of Understanding on Environmental Justice,* signed by heads of federal agencies on August 4, 2011; DOT's revised *Environmental Justice Strategy*, updated on November 15, 2016; and *Executive Order (EO) 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, dated February 11, 1994 (USDOT, 2021).

Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin in programs receiving federal assistance. *EO 12898* requires each federal agency, to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, to achieve environmental justice as part of its mission **by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including interrelated social and economic effects, of its programs, policies, and activities on minority populations and low-income populations** in the United States.

Adverse effects mean the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals in a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of DOT programs, policies, or activities.

Disproportionately high and adverse effect on minority and low-income populations means an adverse effect that: (1) is predominately borne by a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Minority Populations

The study area and surrounding region are more diverse than the state. Most of the population in the study area, block groups (35% to 83%), city (72%), and county (63%) identify as Black or African American, while the majority (64%) identify as White in the state. Race and ethnicity characteristics for the study area (as available), block groups, city, county, and the state are in **Table 4.3-2**.

Minority populations include American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian or Other Pacific Islander (**Figure 4.3-3**). The three block groups in the study area with the highest minority populations are CT 9203.02, BG 4, CT 9202, BG 4, and CT 9203.02, BG 3. The minority population percentage of the block groups (40% - 88%), Bishopville (76%), and Lee County (67%) is higher than South Carolina (36%). Minority populations for the block groups, Bishopville, Lee County, and South Carolina are presented in **Table 4.3-3.**

Low-Income Populations

The median household income for all block groups, Bishopville ($20,565), and Lee County ($31,963) is below the median household income of South Carolina ($48,781). Per the United States Department of Health and Human Services (DHHS) guidelines, the low-income population was calculated by adding the population below poverty and the population near poor, between 100% and 149% of the poverty level. **Table 4.3-9** indicates that 46% of the population in Bishopville is living below the poverty line, which is higher than the county (26%) and the state (17%).

Four of the block groups in the study area have a higher percentage of population below the poverty level than in Lee County. Only CT 9202, BG 1 (8.1%), and CT 9202, BG 3 (14.8%) had a lower percentage of individuals living below the poverty level than the state at 16.6% (**Figure 4.3-4**).

Table 4.3-9. Income Characteristics and Poverty Status

Geographic Area		Total Population	% Below Poverty Level	% Minority
CT 9202	BG 1	974	8.1%	40.3%
	BG 2	1,131	26.9%	43.2%
	BG 3	939	14.8%	57.0%
	BG 4	1,601	63.1%	81.4%
CT 9203.2	BG 2	689	43.5%	78.2%
	BG 3	2,356	29.6%	79.6%
	BG 4	1,217	24.9%	87.8%
Study Area*		5,452	--	76.0%
Bishopville		3,229	46.0%	75.5%
Lee County		17,897	26.4%	67.4%
South Carolina		4,893,444	16.6%	36.2%

Source: US Census Bureau. (2017). *ACS 5-Year Estimates*. Retrieved from https://data.census.gov/cedsci.
*Study Area Source: EPA. (2020). *EJSCREEN: Environmental Justice Screening and Mapping Tool*. Retrieved July 2020 from https://ejscreen.epa.gov/mapper.
Note: Poverty data was measured by individuals. Poverty data was not available for the Study Area.

Environmental Justice Analysis Findings

As stated in FHWA's *Guidance on Environmental Justice and NEPA* and required by *DOT Order 5610.2(c)*, EJ findings, determinations, and/or demonstrations must be appropriately documented in the *NEPA* document. This section includes results of the evaluation of the potential project benefits and burdens to special populations and the potential for the project to result in disproportionately high and adverse effects on EJ populations. To determine if project impacts would disproportionately affect EJ populations, a community-level analysis of impacts was conducted. The potential impacts of the project on EJ populations include short-term construction impacts and other impacts previously discussed above.

No-Build Alternative

The No-Build Alternative would not reduce truck traffic downtown and would not provide the direct and indirect economic benefits that are anticipated with the build alternatives.

Build Alternatives

Traditionally, EJ populations have been underrepresented in the transportation decision-making process. A thorough assessment of the potential effects of the build alternatives on EJ populations encourages projects that are desired by communities, provides an equitable distribution of benefits, and assists decision-makers with identifying early actions to avoid impacts (FHWA, 2018).

Economics

The project would result in direct and indirect positive economic benefits for all residents in the community, including new job opportunities and enhanced services (e.g., public transportation) due to increased tax revenues from previously discussed development and redevelopment.

Mobility

The proposed project is not expected to have adverse effects on the overall transportation system. Travel behavior of residents, workers, and special populations may change, but no long-term adverse effects are expected as a result of the project. No special transportation modes service special needs populations, and the project is not anticipated to have disproportionately adverse effects.

Lee County Transit provides public transportation for residents. Three loops operate five days per week in the City of Bishopville, and a commuter route from Bishopville to Lynchburg operates one day per week. Removal of heavy truck traffic through the city core would have a positive impact on mobility for drivers, transit users, and pedestrians in downtown Bishopville.

Community Impacts

As discussed previously, the project would result in minimal direct community impacts such as noise, visual, and other physical environment changes. Eight of the build alternatives would likely require the relocation of residents and/or businesses, but overall the number of relocations is minimal, and significant long-term disruption to residential areas is not anticipated.

The number of relocations under Build Alternatives 1, 3, 4, 7, 9, 10, 11, and 12 range from three to eight relocations. Alternatives 9 and 11 would require the most relocations (seven and eight, respectively). Alternatives 2, 5, 6 (Preferred Alternative), and 8 would not require any relocations.

Disproportionately high and adverse effects on community groups and community resources that serve EJ populations are not anticipated from the proposed project, as there are no long-term adverse impacts on community resources identified in the study area. The project is expected to have a positive impact on the aesthetics due to reduced truck traffic and noise on community focal points of Bishopville downtown (e.g., historic structures and other gathering places downtown).

Given that the project is in a rural area with limited bicycle and pedestrian facilities, the effects on community cohesion and the quantity or quality of human interaction are expected to be minimal and are not expected to create or eliminate barriers to interaction. The project is expected to complement community goals for redeveloping downtown, which is a focal point for Bishopville, and improve safety downtown for pedestrians and bicyclists by reducing truck traffic. The local community—including EJ populations—would benefit from the project through:

- Employment opportunities from construction and potential redevelopment/development;
- Positive economic gains in the form of increased wages and spending;
- Improved mobility through the project vicinity and reduced travel times;
- Improved safety for pedestrians, bicyclists, and motorists in downtown Bishopville; and
- Enhanced access and connectivity in the transportation network.

Environmental Justice Determination

Environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, income, national origin, or educational level, for the development, implementation, and enforcement of environmental laws, regulations, and policies. It is DOT's policy to administer and monitor its operations and decision-making to ensure that nondiscrimination and the prevention of disproportionately high and adverse effects are an integral part of its programs, policies, and activities (USDOT, 2021). Therefore, per FHWA EJ guidance documents and *DOT Order 5610.2(c)*, the context and intensity of the potential impacts of the Bishopville Truck Route Project were factors in determining whether or not EJ populations would bear a disproportionate burden of the negative human health and environmental impacts. Based on the community impact assessment of existing conditions and analysis of project impacts, the conclusion is that none of the proposed build alternatives (Alternatives 1-12) would result in disproportionately high and adverse effects on any minority or low-income populations. In accordance with the provisions of *DOT Order 5610.2(c)*, *EO 12898*, and *FHWA Order 6640.23A*, no further EJ analysis is required. For more information, the *Bishopville Truck Route Project Environmental Justice Assessment* (2021) is in **Appendix G**.

Environmental Justice

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, income, national origin, or educational level. DOT comprehensively incorporates EJ considerations into all of DOT's programs, policies, and activities. By ensuring opportunities for minority and low-income communities to influence the transportation planning and decision-making processes through enhanced engagement and meaningful input, the DOT actively prevents disproportionately high and adverse project effects on minority and low-income communities.

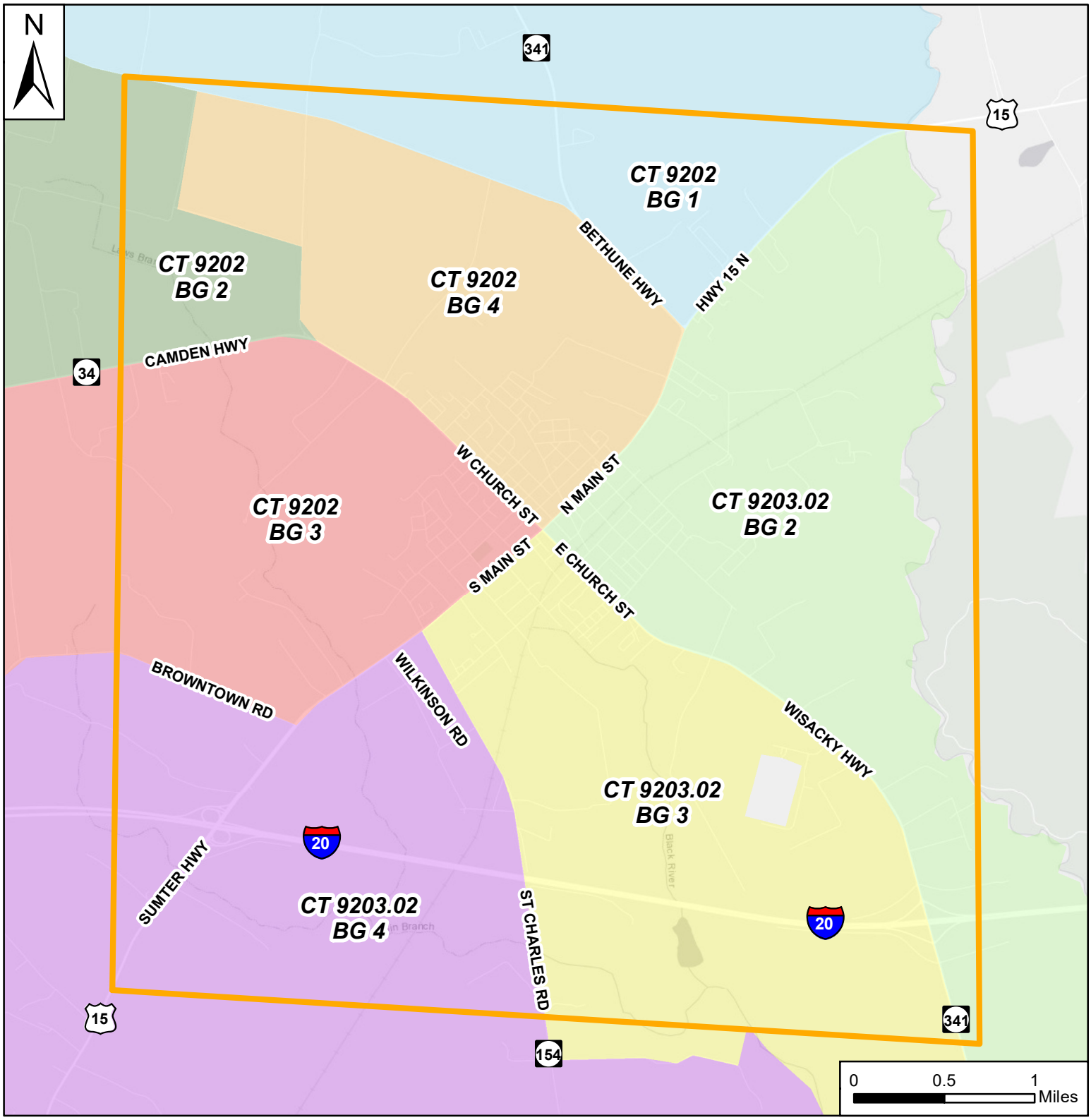
4.3.4 How would impacts be mitigated?

EJ principles apply to planning and programming activities, and early planning activities are a critical means to avoid disproportionately high and adverse effects in programs, policies, and activities.

If relocations are unavoidable, property acquisition and relocations would be conducted in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (URA),* as amended. The *URA* "establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms." The SCDOT Right-of-Way (ROW) Department is responsible for the acquisition of land and right-of-way for highway projects. SCDOT must ensure that persons displaced receive fair, uniform, and equitable treatment and that such persons shall not suffer disproportionate injuries as a result of the projects designed for the benefit of the public as a whole.

More information on ROW acquisition and relocations is available in SCDOT's *Department of Right-of-Way's Acquisition Manual* and *Department of Right-of-Way's Relocation Assistance Manual*. In addition to conforming with the *URA*, mitigation measures will also include:

- Continuing to identify design modifications through final design to minimize impacts;
- Meeting with neighborhood organization and business community representatives;
- Coordinating with emergency service providers, schools, and other community resources that may be affected by construction activities to minimize construction impacts; and
- Scheduling construction operations for off-peak hours when reasonable and feasible.



CT 9202, BG 1	CT 9203.2, BG 2
CT 9202, BG 2	CT 9203.2, BG 3
CT 9202 BG, 3	CT 9203.2, BG 4
CT 9202, BG 4	Study Area

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Study Area and Block Groups

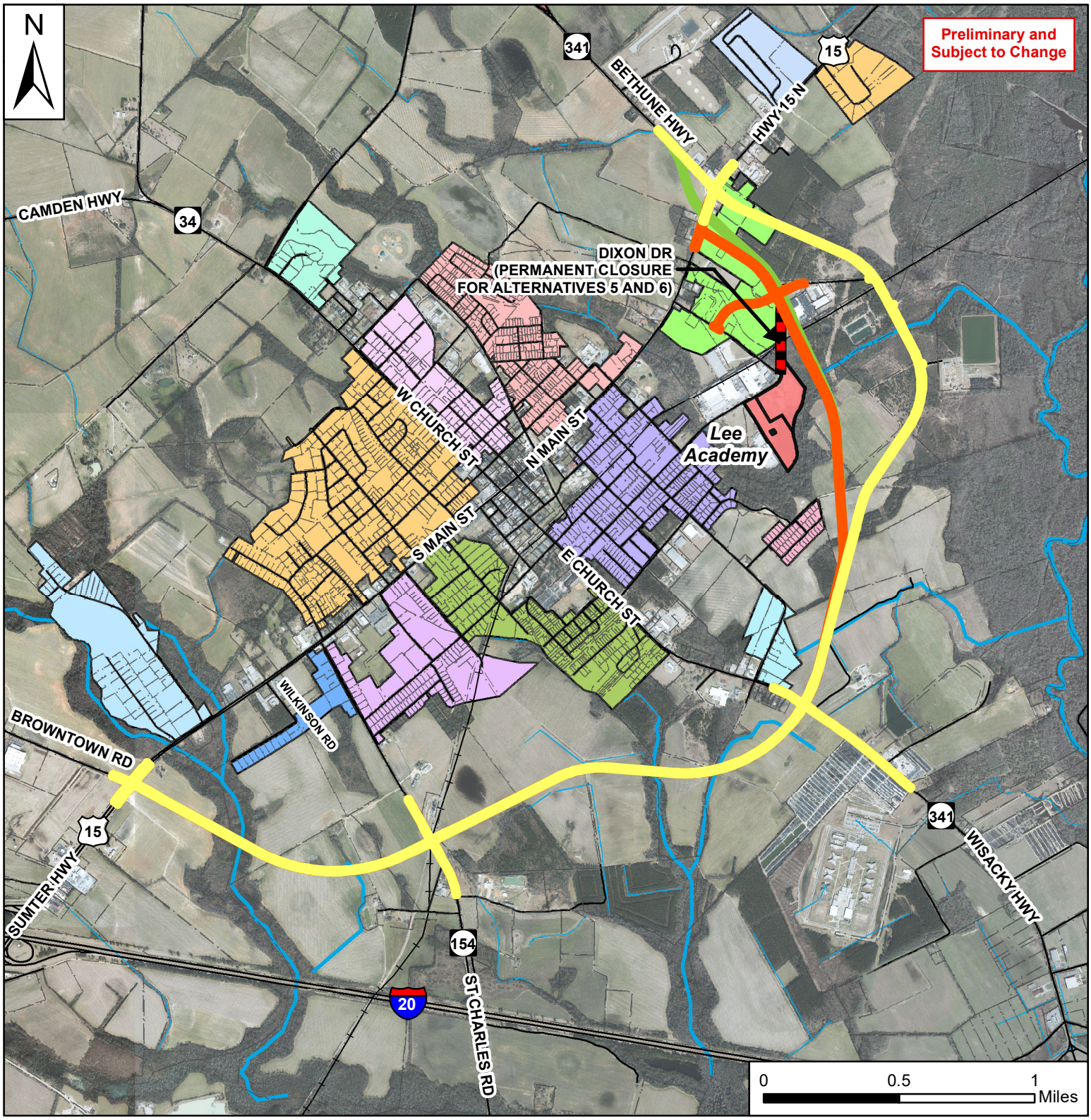
Figure

4.3-1

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Permanent Road Closure
- Rivers and Streams
- Road
- SCRF Railroad
- Alternative 1
- Alternative 5
- Alternative 6
- Parcel

- Bradley Ave Res. Area
- Broad Acres Res. Area
- Calhoun Res. Area
- Davis Street Res. Area
- Dennis Avenue Res. Area
- Dixon Drive Res. Area
- Edgefield Drive Res. Area
- James Street Res. Area
- Julia Drive Res. Area
- Lucknow Res. Area
- Magnolia Drive Res. Area
- Price Lane Res. Area
- Roland Street Res. Area
- Tim's Drive Res. Area
- Wags Drive Res. Area

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Residential Areas – Alternatives 1, 5, and 6

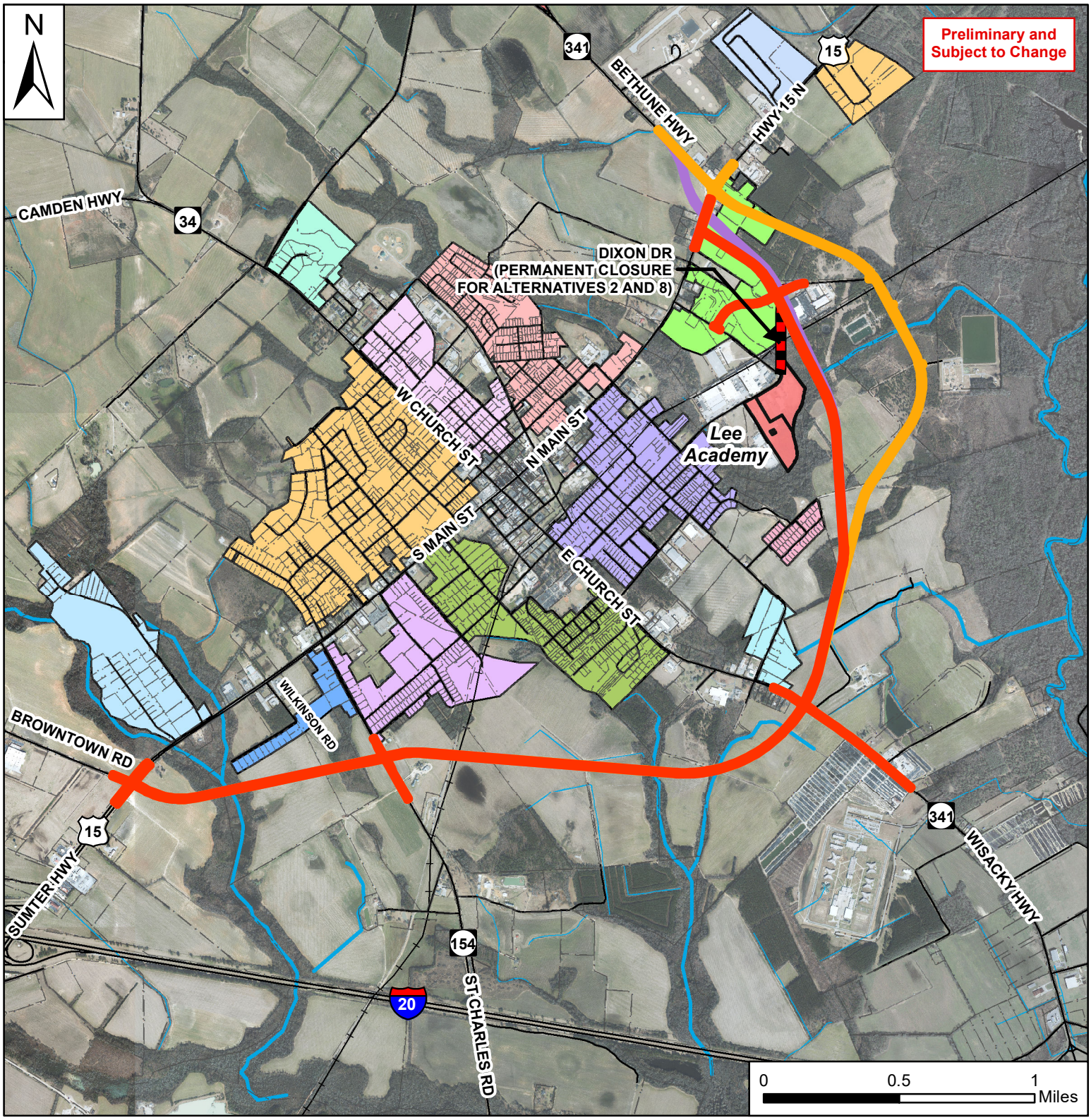
Figure

4.3-2a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Permanent Road Closure
- Rivers and Streams
- Road
- SCRF Railroad
- Alternative 2
- Alternative 7
- Alternative 8
- Parcel
- Bradley Ave Res. Area
- Broad Acres Res. Area
- Calhoun Res. Area
- Davis Street Res. Area
- Dennis Avenue Res. Area
- Dixon Drive Res. Area
- Edgefield Drive Res. Area
- James Street Res. Area
- Julia Drive Res. Area
- Lucknow Res. Area
- Magnolia Drive Res. Area
- Price Lane Res. Area
- Roland Street Res. Area
- Tim's Drive Res. Area
- Wags Drive Res. Area

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Residential Areas – Alternatives 2, 7, and 8

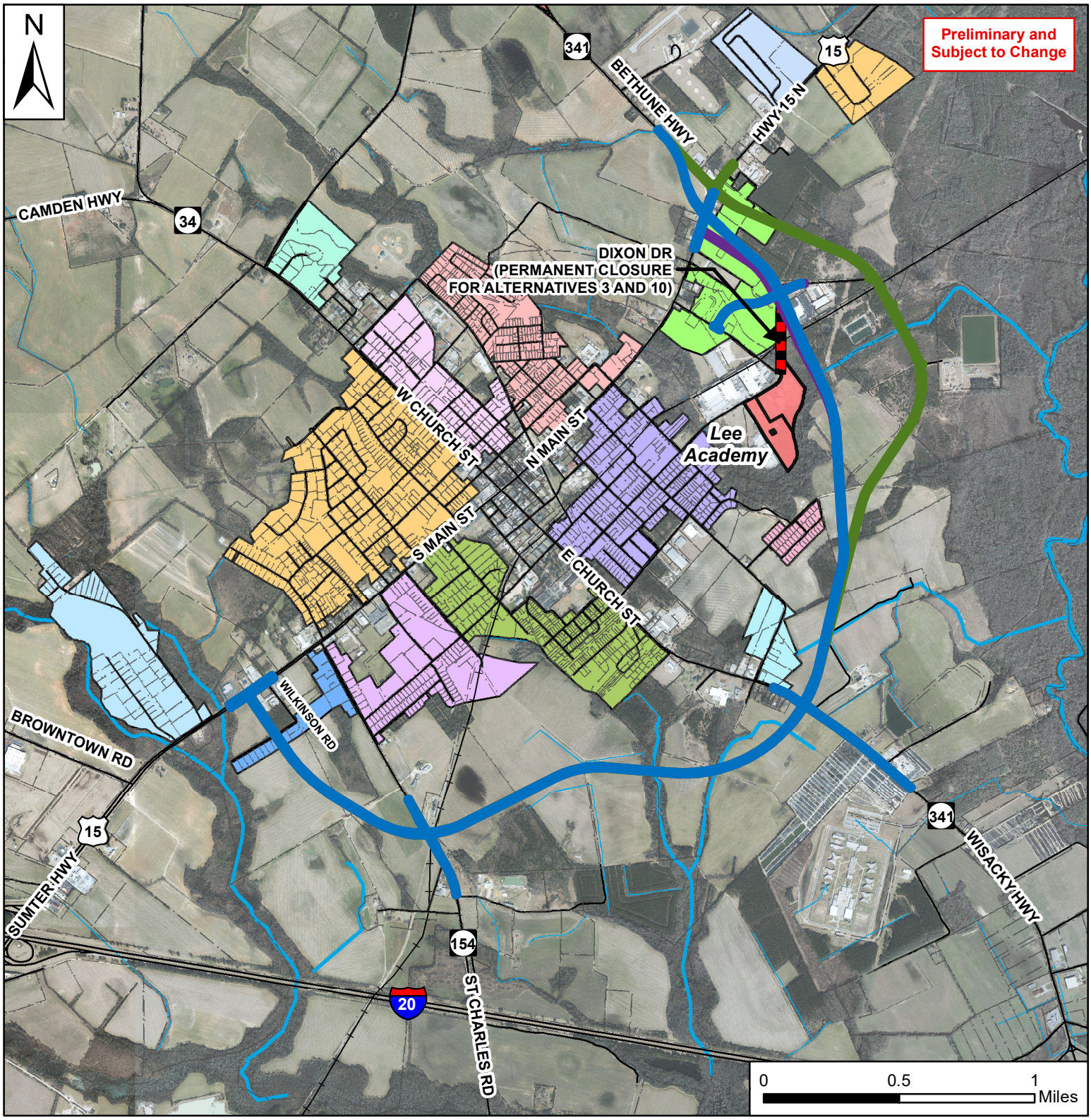
Figure

4.3-2b

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Permanent Road Closure
- Rivers and Streams
- Road
- SCRF Railroad
- Alternative 3
- Alternative 9
- Alternative 10
- Parcel
- Bradley Ave Res. Area
- Broad Acres Res. Area
- Calhoun Res. Area
- Davis Street Res. Area
- Dennis Avenue Res. Area
- Dixon Drive Res. Area
- Edgefield Drive Res. Area
- James Street Res. Area
- Julia Drive Res. Area
- Lucknow Res. Area
- Magnolia Drive Res. Area
- Price Lane Res. Area
- Roland Street Res. Area
- Tim's Drive Res. Area
- Wags Drive Res. Area

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Residential Areas – Alternatives 3, 9, and 10

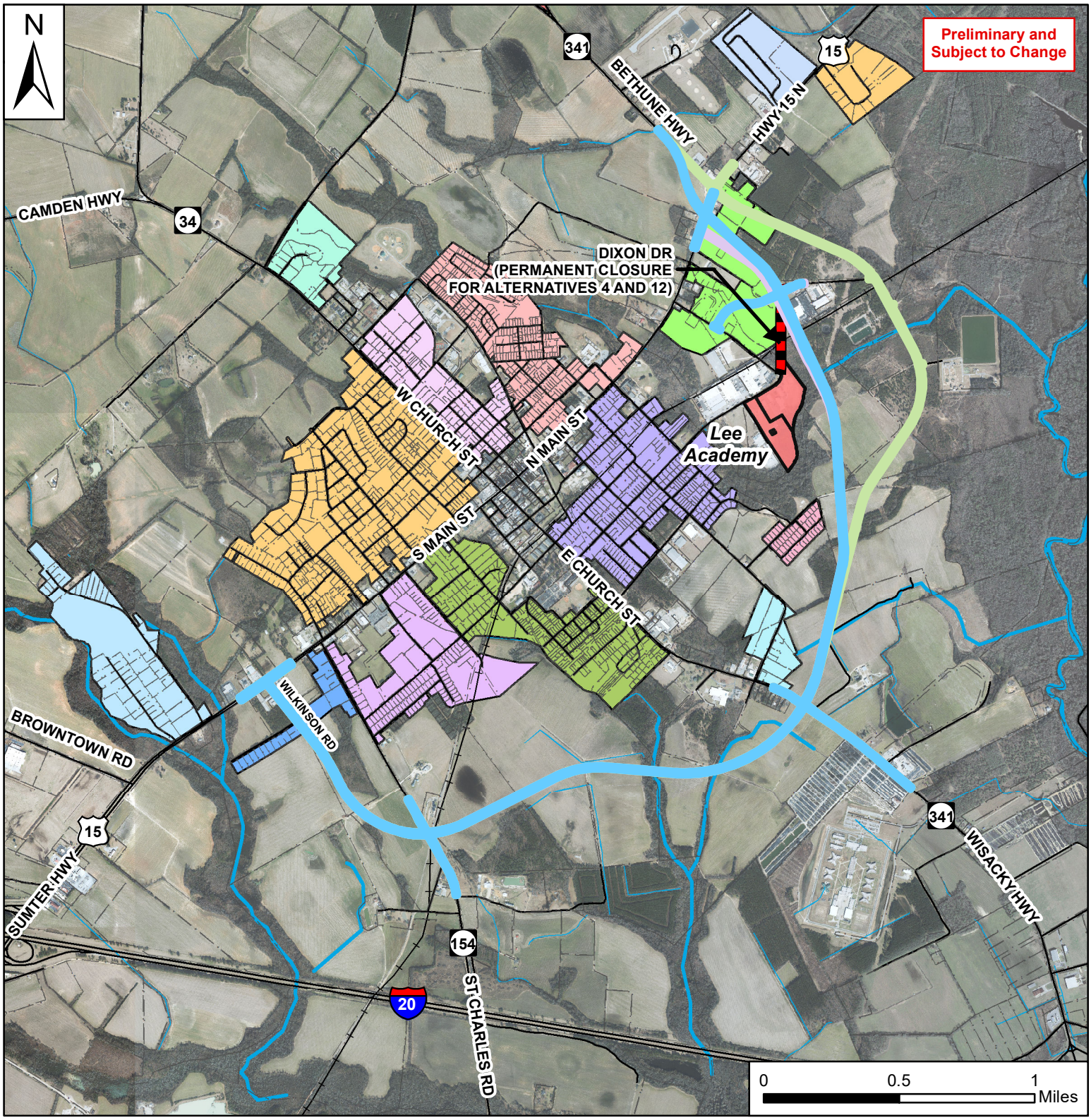
Figure

4.3-2c

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Permanent Road Closure
- Rivers and Streams
- Road
- SCRF Railroad
- Alternative 4
- Alternative 11
- Alternative 12
- Parcel
- Bradley Ave Res. Area
- Broad Acres Res. Area
- Calhoun Res. Area
- Davis Street Res. Area
- Dennis Avenue Res. Area
- Dixon Drive Res. Area
- Edgefield Drive Res. Area
- James Street Res. Area
- Julia Drive Res. Area
- Lucknow Res. Area
- Magnolia Drive Res. Area
- Price Lane Res. Area
- Roland Street Res. Area
- Tim's Drive Res. Area
- Wags Drive Res. Area

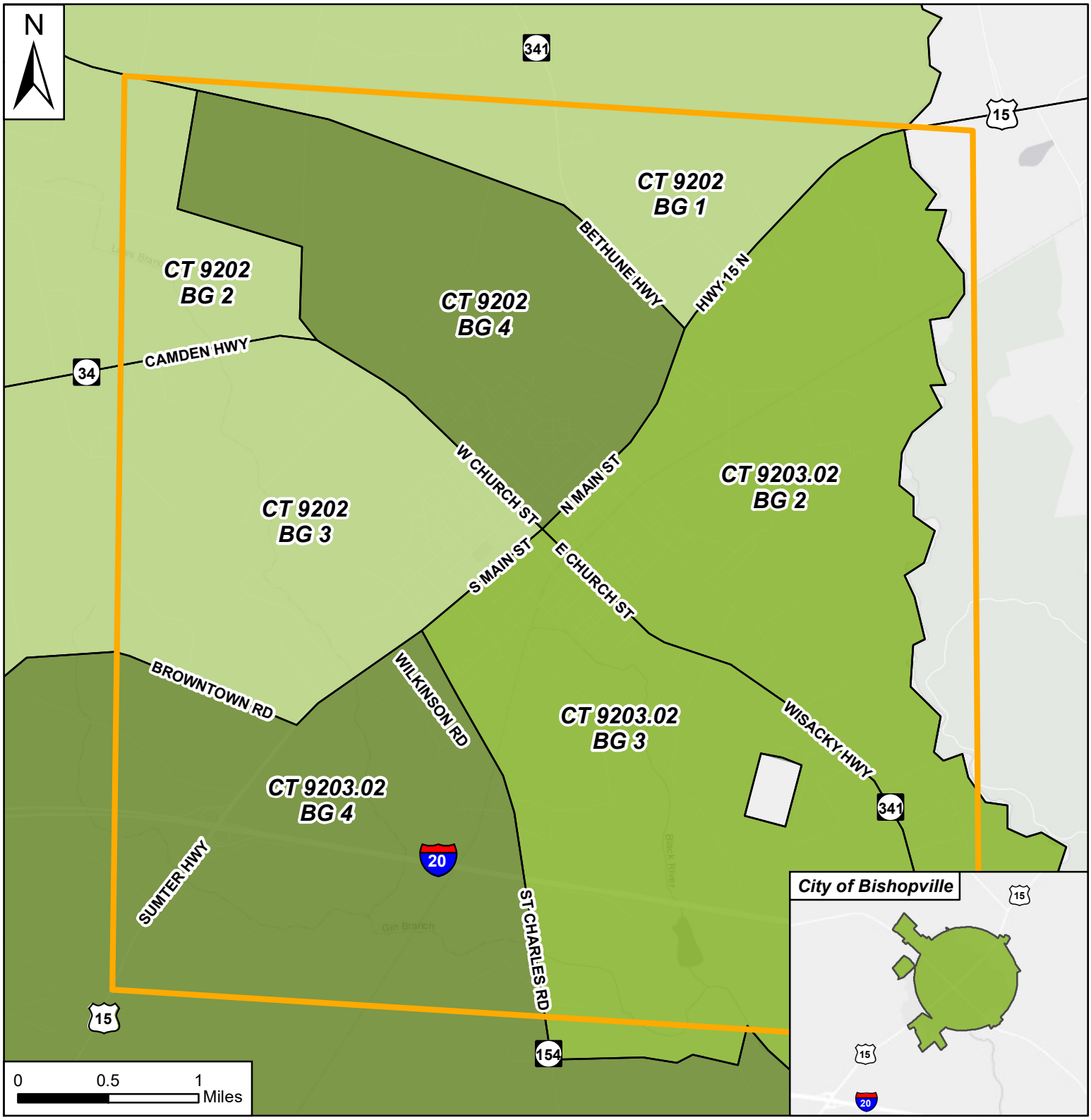
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Residential Areas – Alternatives 4, 11, and 12

Figure

4.3-2d



Minority Population Percentage

- 40.1% - 60%
- 60.1% - 80%
- 80.1% - 100%

Study Area

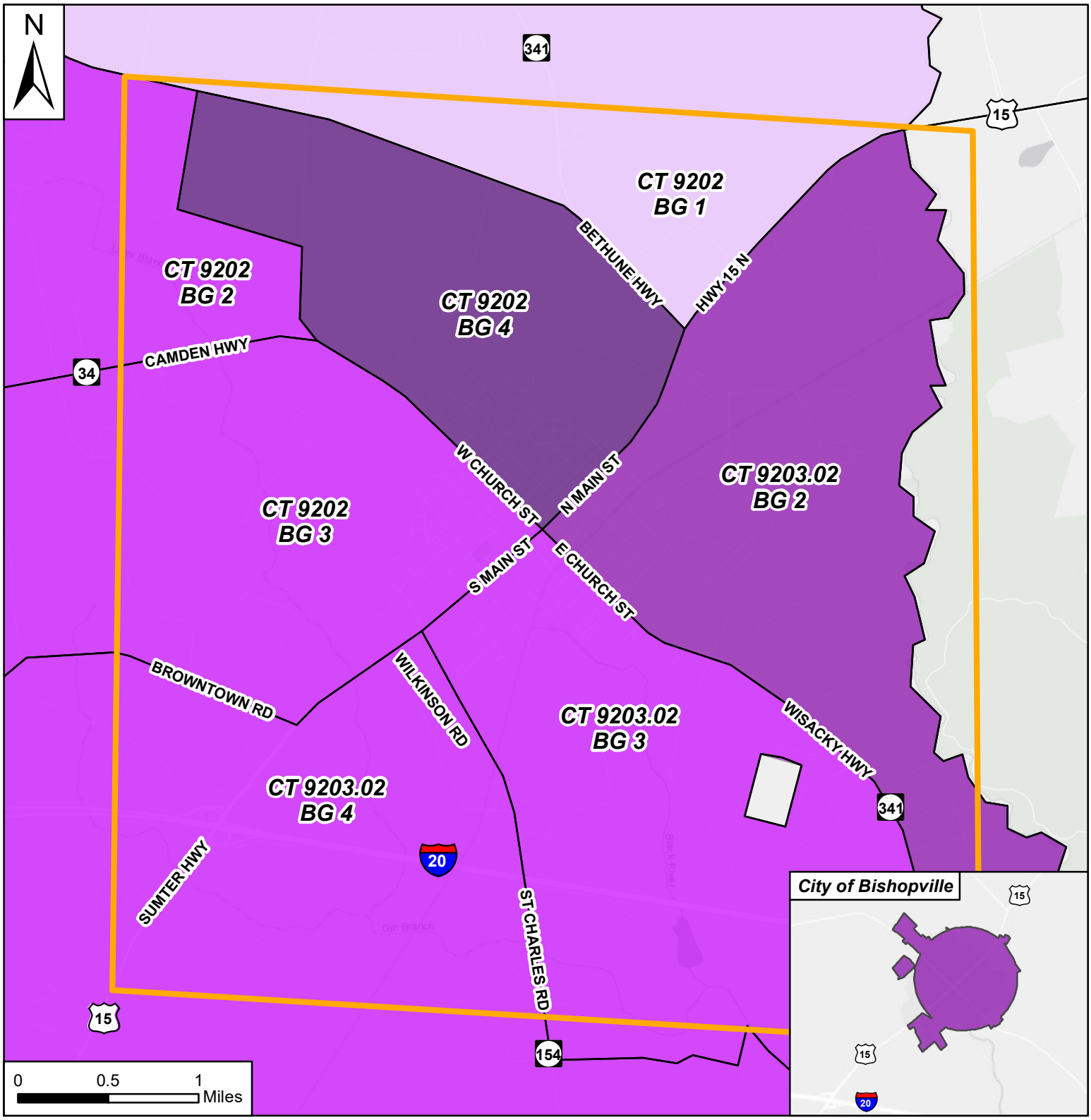
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Minority Population

Figure

4.3-3



Population Below Poverty Level

- <10%
- 10.1% - 30%
- 30.1% - 50%
- >50%

Study Area

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Low-Income Population

Figure

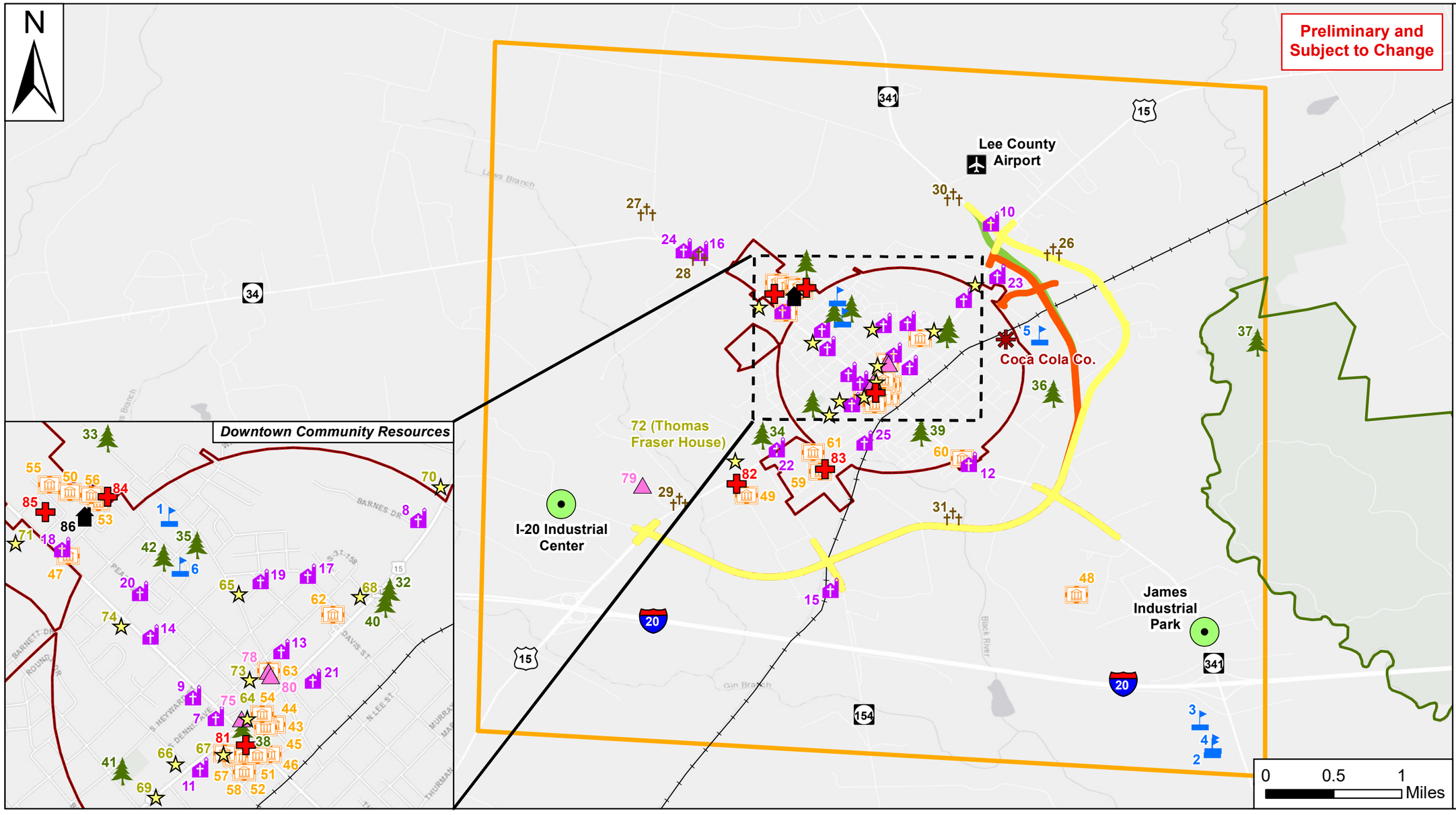
4.3-4

South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration

Preliminary and Subject to Change



1 Dennis Elementary School
2 Lee Central High School
3 Lee Central Middle School
4 Lee County Career & Technology Center
5 Lee Academy
6 Lee County School District Office
7 Bethlehem United Methodist Church
8 Bishopville Church of Christ
9 Bishopville First Baptist Church
10 Bishopville Kingdom Hall of Jehovah's Witnesses
11 Bishopville Presbyterian Church
12 Cousar Memorial Presbyterian
13 First Church of the Nazarene
14 Joshua Church of Deliverance
15 Liberty Hill Baptist Church
16 Mt. Calvary Baptist Church
17 Mt. Hermon Baptist Church
18 Mustard Seed Baptist Church
19 New Bethel AME Church
20 New Journey Bishopville Church of God
21 Now Faith Church of Deliverance
22 St. John AME Church
23 Tabernacle of Champions
24 Weeping Mary Baptist Church
25 Wesley Memorial Church
26 Albert Family Cemetery
27 Bethlehem United Methodist Church Cemetry
28 Mt. Calvary Baptist Church Cemetery
29 Piedmont Cemetery
30 Unnamed Cemetery
31 Unnamed Cemetery
32 Bishopville High Memorial Gym/Football Field
33 Chappell Park
34 Churchwood Park
35 Dennis High Memorial Park
36 Green Acres Park and Playground
37 Lee State Park
38 Main Street (Flag Park)
39 M.M. Levy Park and Garrett Field
40 Old Bishopville High School Campus
41 Old Grammar School Park
42 Roland Street Tennis Courts
43 Bishopville City Hall
44 Bishopville Fire Department
45 Bishopville Police Department
46 Clemson Extension Lee County
47 First Steps South Carolina
48 Lee County Correctional Institution
49 Lee County Council on Aging
50 Lee County Disabilities & Special Needs
51 Lee County Fire Department Headquarters
52 Lee County Fire Department Station 11
53 Lee County Health Department
54 Lee County Public Library
55 Lee County Department of Social Services
56 Lee County Special Housing
57 Lee County Treasurer's Office
58 Magistrate's Office
59 South Carolina Department of Motor Vehicles
60 South Carolina Department of Transportation
61 U.S. Agricultural Department
62 U.S. Postal Office
63 Veterans Affairs
64 Bishopville Commercial Historic District
65 Dennis High School
66 James Carnes House
67 Lee County Courthouse
68 The Manor
69 South Main Street Historic District
70 Spencer House
71 Tall Oaks Plantation
72 Thomas Fraser House
73 William Apollos James House
74 William Rogers House
75 Bishopville Opera House
78 Lee County Veterans Museum
79 Pearl Fryar's Topiary Garden
80 South Carolina Cotton Museum
81 The ALPHA Behavioral Health Center
82 CareSouth-Carolina
83 Fresenius Kidney Care Lee County
84 Gibbs Community Training Center
85 Palmetto Health - USC Family Medicine
86 McCoy Memorial Nursing Center

- Assisted Living Facility
- Cemetery
- Cultural Resource
- Educational Resource
- Government Resource
- Medical Resource
- Other Resource
- Place of Worship
- Recreational Resource
- SCRF Railroad
- Municipal Boundary
- Study Area
- Alternative 1
- Alternative 5
- Alternative 6

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

Community Resources – Alternatives 1, 5, and 6

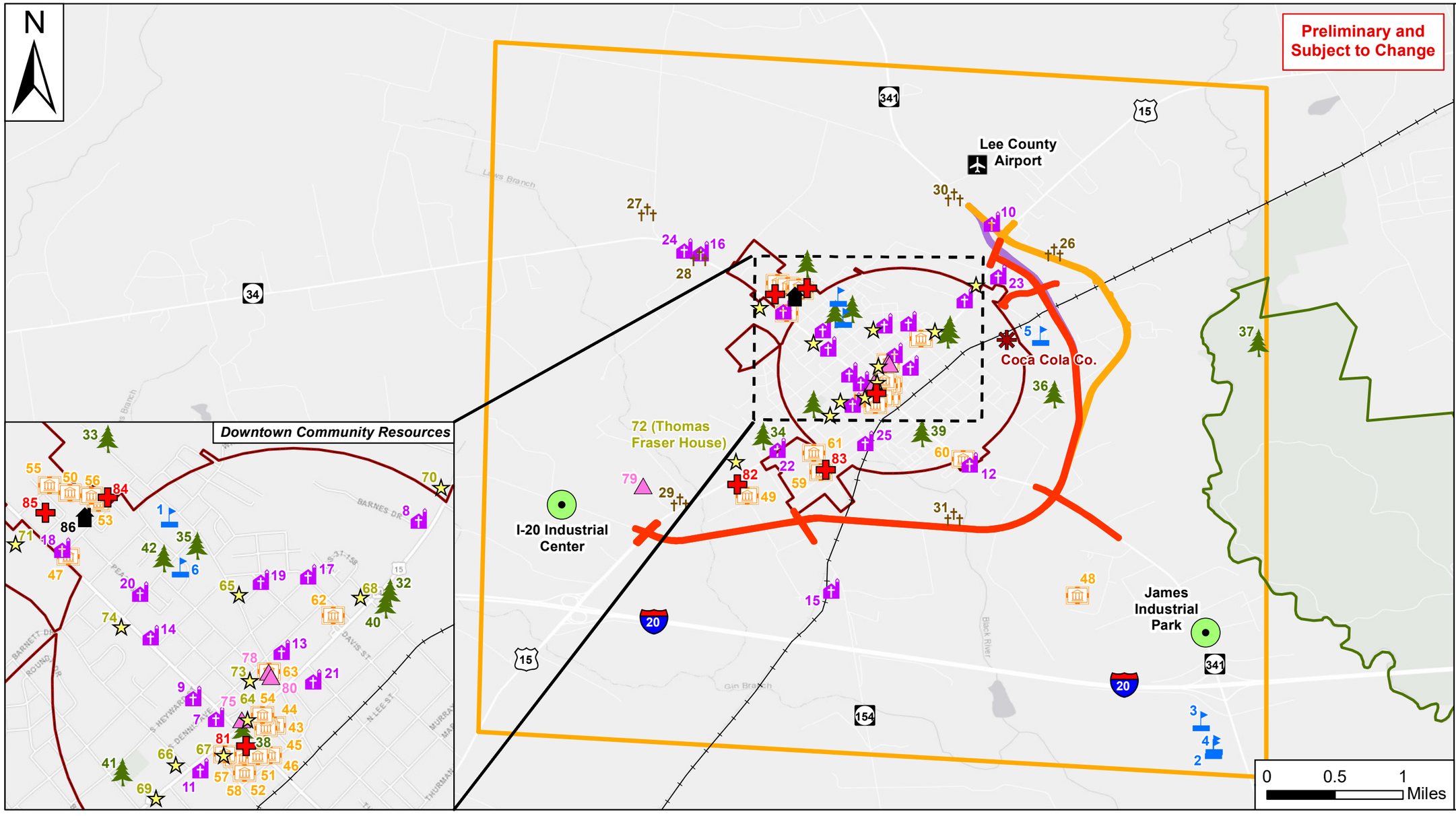
Figure 4.3-5a

South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration

Preliminary and Subject to Change



1 Dennis Elementary School
2 Lee Central High School
3 Lee Central Middle School
4 Lee County Career & Technology Center
5 Lee Academy
6 Lee County School District Office
7 Bethlehem United Methodist Church
8 Bishopville Church of Christ
9 Bishopville First Baptist Church
10 Bishopville Kingdom Hall of Jehovah's Witnesses
11 Bishopville Presbyterian Church
12 Cousar Memorial Presbyterian
13 First Church of the Nazarene
14 Joshua Church of Deliverance
15 Liberty Hill Baptist Church
16 Mt. Calvary Baptist Church
17 Mt. Hermon Baptist Church
18 Mustard Seed Baptist Church
19 New Bethel AME Church
20 New Journey Bishopville Church of God
21 Now Faith Church of Deliverance
22 St. John AME Church
23 Tabernacle of Champions
24 Weeping Mary Baptist Church
25 Wesley Memorial Church
26 Albert Family Cemetery
27 Bethlehem United Methodist Church Cemetry
28 Mt. Calvary Baptist Church Cemetery
29 Piedmont Cemetery
30 Unnamed Cemetery
31 Unnamed Cemetery
32 Bishopville High Memorial Gym/Football Field
33 Chappell Park
34 Churchwood Park
35 Dennis High Memorial Park
36 Green Acres Park and Playground
37 Lee State Park
38 Main Street (Flag Park)
39 M.M. Levy Park and Garrett Field
40 Old Bishopville High School Campus
41 Old Grammar School Park
42 Roland Street Tennis Courts
43 Bishopville City Hall
44 Bishopville Fire Department
45 Bishopville Police Department
46 Clemson Extension Lee County
47 First Steps South Carolina
48 Lee County Correctional Institution
49 Lee County Council on Aging
50 Lee County Disabilities & Special Needs
51 Lee County Fire Department Headquarters
52 Lee County Fire Department Station 11
53 Lee County Health Department
54 Lee County Public Library
55 Lee County Department of Social Services
56 Lee County Special Housing
57 Lee County Treasurer's Office
58 Magistrate's Office
59 South Carolina Department of Motor Vehicles
60 South Carolina Department of Transportation
61 U.S. Agricultural Department
62 U.S. Postal Office
63 Veterans Affairs
64 Bishopville Commercial Historic District
65 Dennis High School
66 James Carnes House
67 Lee County Courthouse
68 The Manor
69 South Main Street Historic District
70 Spencer House
71 Tall Oaks Plantation
72 Thomas Fraser House
73 William Apollos James House
74 William Rogers House
75 Bishopville Opera House
78 Lee County Veterans Museum
79 Pearl Fryar's Topiary Garden
80 South Carolina Cotton Museum
81 The ALPHA Behavioral Health Center
82 CareSouth-Carolina
83 Fresenius Kidney Care Lee County
84 Gibbs Community Training Center
85 Palmetto Health - USC Family Medicine
86 McCoy Memorial Nursing Center

- Assisted Living Facility
- Cemetery
- Cultural Resource
- Educational Resource
- Government Resource
- Medical Resource
- Other Resource
- Place of Worship
- Recreational Resource
- SCRF Railroad
- Municipal Boundary
- Study Area
- Alternative 2
- Alternative 7
- Alternative 8

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

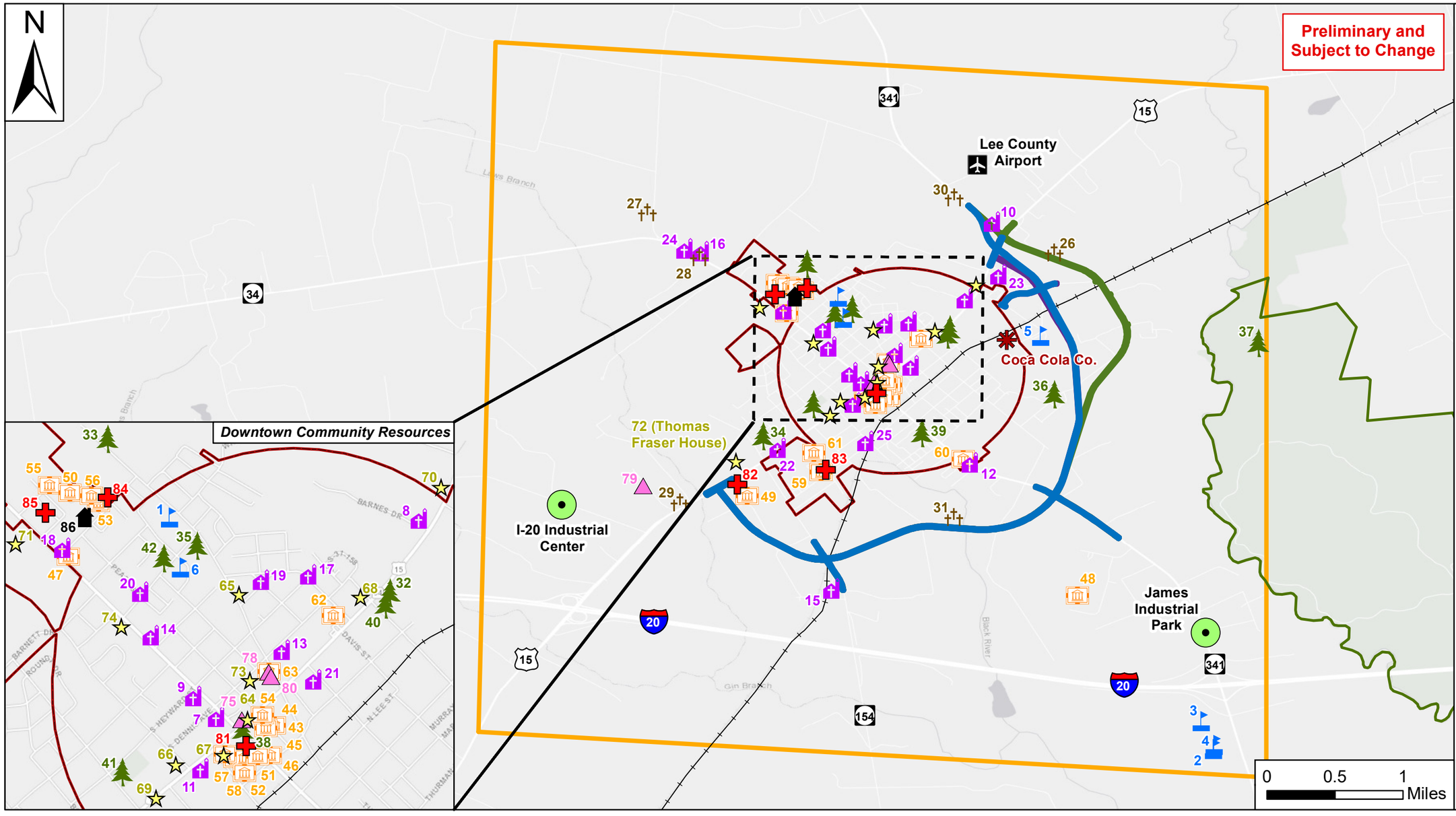
Community Resources – Alternatives 2, 7, and 8

Figure 4.3-5b

South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



1 Dennis Elementary School
2 Lee Central High School
3 Lee Central Middle School
4 Lee County Career & Technology Center
5 Lee Academy
6 Lee County School District Office
7 Bethlehem United Methodist Church
8 Bishopville Church of Christ
9 Bishopville First Baptist Church
10 Bishopville Kingdom Hall of Jehovah's Witnesses
11 Bishopville Presbyterian Church
12 Cousar Memorial Presbyterian
13 First Church of the Nazarene
14 Joshua Church of Deliverance
15 Liberty Hill Baptist Church
16 Mt. Calvary Baptist Church
17 Mt. Hermon Baptist Church
18 Mustard Seed Baptist Church
19 New Bethel AME Church
20 New Journey Bishopville Church of God
21 Now Faith Church of Deliverance
22 St. John AME Church
23 Tabernacle of Champions
24 Weeping Mary Baptist Church
25 Wesley Memorial Church
26 Albert Family Cemetery
27 Bethlehem United Methodist Church Cemetry
28 Mt. Calvary Baptist Church Cemetery
29 Piedmont Cemetery
30 Unnamed Cemetery
31 Unnamed Cemetery
32 Bishopville High Memorial Gym/Football Field
33 Chappell Park
34 Churchwood Park
35 Dennis High Memorial Park
36 Green Acres Park and Playground
37 Lee State Park
38 Main Street (Flag Park)
39 M.M. Levy Park and Garrett Field
40 Old Bishopville High School Campus
41 Old Grammar School Park
42 Roland Street Tennis Courts
43 Bishopville City Hall
44 Bishopville Fire Department
45 Bishopville Police Department
46 Clemson Extension Lee County
47 First Steps South Carolina
48 Lee County Correctional Institution
49 Lee County Council on Aging
50 Lee County Disabilities & Special Needs
51 Lee County Fire Department Headquarters
52 Lee County Fire Department Station 11
53 Lee County Health Department
54 Lee County Public Library
55 Lee County Department of Social Services
56 Lee County Special Housing
57 Lee County Treasurer's Office
58 Magistrate's Office
59 South Carolina Department of Motor Vehicles
60 South Carolina Department of Transportation
61 U.S. Agricultural Department
62 U.S. Postal Office
63 Veterans Affairs
64 Bishopville Commercial Historic District
65 Dennis High School
66 James Carnes House
67 Lee County Courthouse
68 The Manor
69 South Main Street Historic District
70 Spencer House
71 Tall Oaks Plantation
72 Thomas Fraser House
73 William Apollos James House
74 William Rogers House
75 Bishopville Opera House
78 Lee County Veterans Museum
79 Pearl Fryar's Topiary Garden
80 South Carolina Cotton Museum
81 The ALPHA Behavioral Health Center
82 CareSouth-Carolina
83 Fresenius Kidney Care Lee County
84 Gibbs Community Training Center
85 Palmetto Health - USC Family Medicine
86 McCoy Memorial Nursing Center

- Assisted Living Facility
- Cemetery
- Cultural Resource
- Educational Resource
- Government Resource
- Medical Resource
- Other Resource
- Place of Worship
- Recreational Resource
- SCRF Railroad
- Municipal Boundary
- Study Area
- Alternative 3
- Alternative 9
- Alternative 10

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

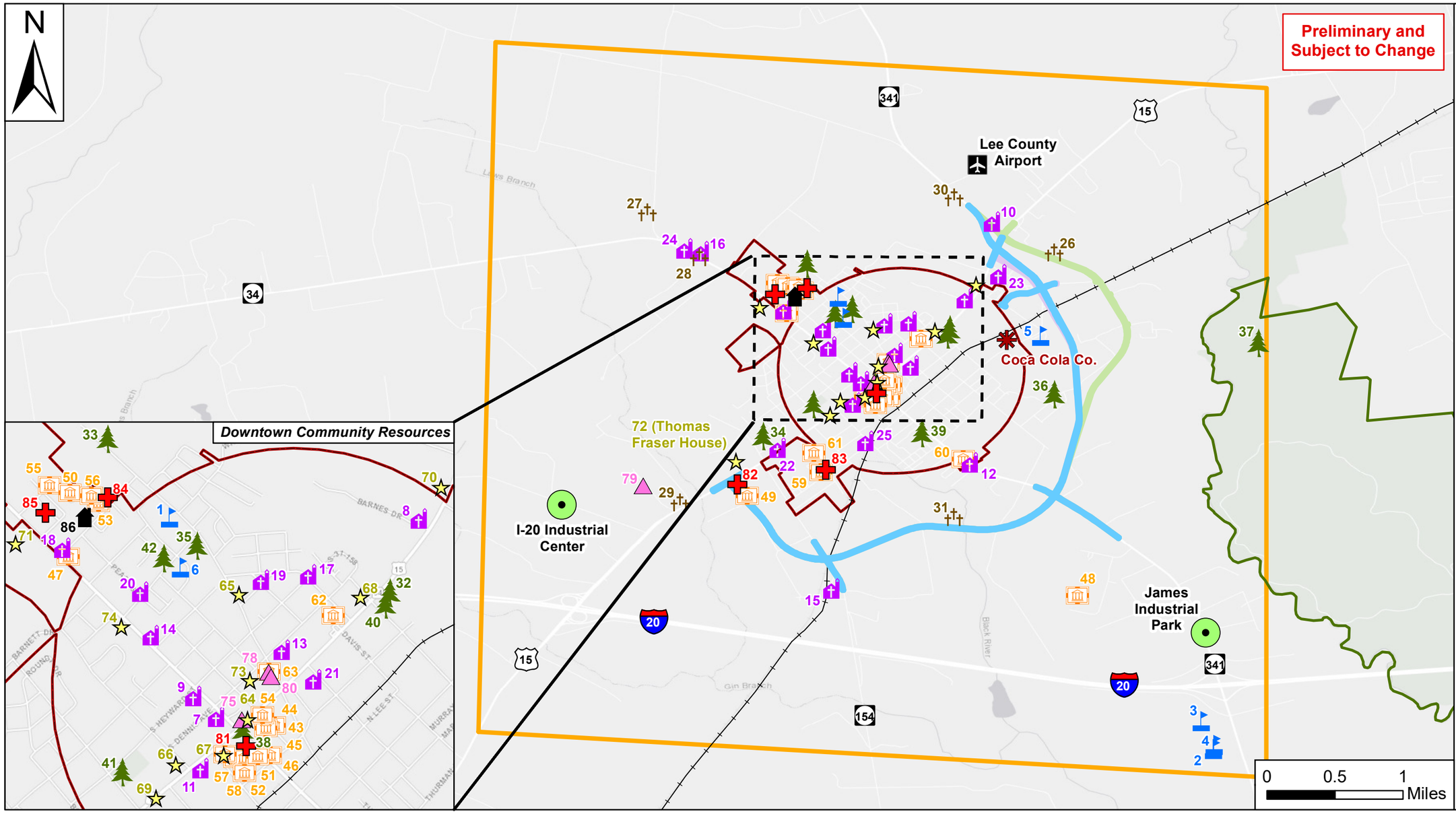
Community Resources – Alternatives 3, 9, and 10

Figure 4.3-5c

South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



1 Dennis Elementary School
2 Lee Central High School
3 Lee Central Middle School
4 Lee County Career & Technology Center
5 Lee Academy
6 Lee County School District Office
7 Bethlehem United Methodist Church
8 Bishopville Church of Christ
9 Bishopville First Baptist Church
10 Bishopville Kingdom Hall of Jehovah's Witnesses
11 Bishopville Presbyterian Church
12 Cousar Memorial Presbyterian
13 First Church of the Nazarene
14 Joshua Church of Deliverance
15 Liberty Hill Baptist Church
16 Mt. Calvary Baptist Church
17 Mt. Hermon Baptist Church
18 Mustard Seed Baptist Church
19 New Bethel AME Church
20 New Journey Bishopville Church of God
21 Now Faith Church of Deliverance
22 St. John AME Church
23 Tabernacle of Champions
24 Weeping Mary Baptist Church
25 Wesley Memorial Church
26 Albert Family Cemetery
27 Bethlehem United Methodist Church Cemetry
28 Mt. Calvary Baptist Church Cemetery
29 Piedmont Cemetery
30 Unnamed Cemetery
31 Unnamed Cemetery
32 Bishopville High Memorial Gym/Football Field
33 Chappell Park
34 Churchwood Park
35 Dennis High Memorial Park
36 Green Acres Park and Playground
37 Lee State Park
38 Main Street (Flag Park)
39 M.M. Levy Park and Garrett Field
40 Old Bishopville High School Campus
41 Old Grammar School Park
42 Roland Street Tennis Courts
43 Bishopville City Hall
44 Bishopville Fire Department
45 Bishopville Police Department
46 Clemson Extension Lee County
47 First Steps South Carolina
48 Lee County Correctional Institution
49 Lee County Council on Aging
50 Lee County Disabilities & Special Needs
51 Lee County Fire Department Headquarters
52 Lee County Fire Department Station 11
53 Lee County Health Department
54 Lee County Public Library
55 Lee County Department of Social Services
56 Lee County Special Housing
57 Lee County Treasurer's Office
58 Magistrate's Office
59 South Carolina Department of Motor Vehicles
60 South Carolina Department of Transportation
61 U.S. Agricultural Department
62 U.S. Postal Office
63 Veterans Affairs
64 Bishopville Commercial Historic District
65 Dennis High School
66 James Carnes House
67 Lee County Courthouse
68 The Manor
69 South Main Street Historic District
70 Spencer House
71 Tall Oaks Plantation
72 Thomas Fraser House
73 William Apollos James House
74 William Rogers House
75 Bishopville Opera House
78 Lee County Veterans Museum
79 Pearl Fryar's Topiary Garden
80 South Carolina Cotton Museum
81 The ALPHA Behavioral Health Center
82 CareSouth-Carolina
83 Fresenius Kidney Care Lee County
84 Gibbs Community Training Center
85 Palmetto Health - USC Family Medicine
86 McCoy Memorial Nursing Center

- Assisted Living Facility
- Cemetery
- Cultural Resource
- Educational Resource
- Government Resource
- Medical Resource
- Other Resource
- Place of Worship
- Recreational Resource
- SCRF Railroad
- Municipal Boundary
- Study Area
- Alternative 4
- Alternative 11
- Alternative 12

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

Community Resources – Alternatives 4, 11, and 12

Figure 4.3-5d

4.4 Noise

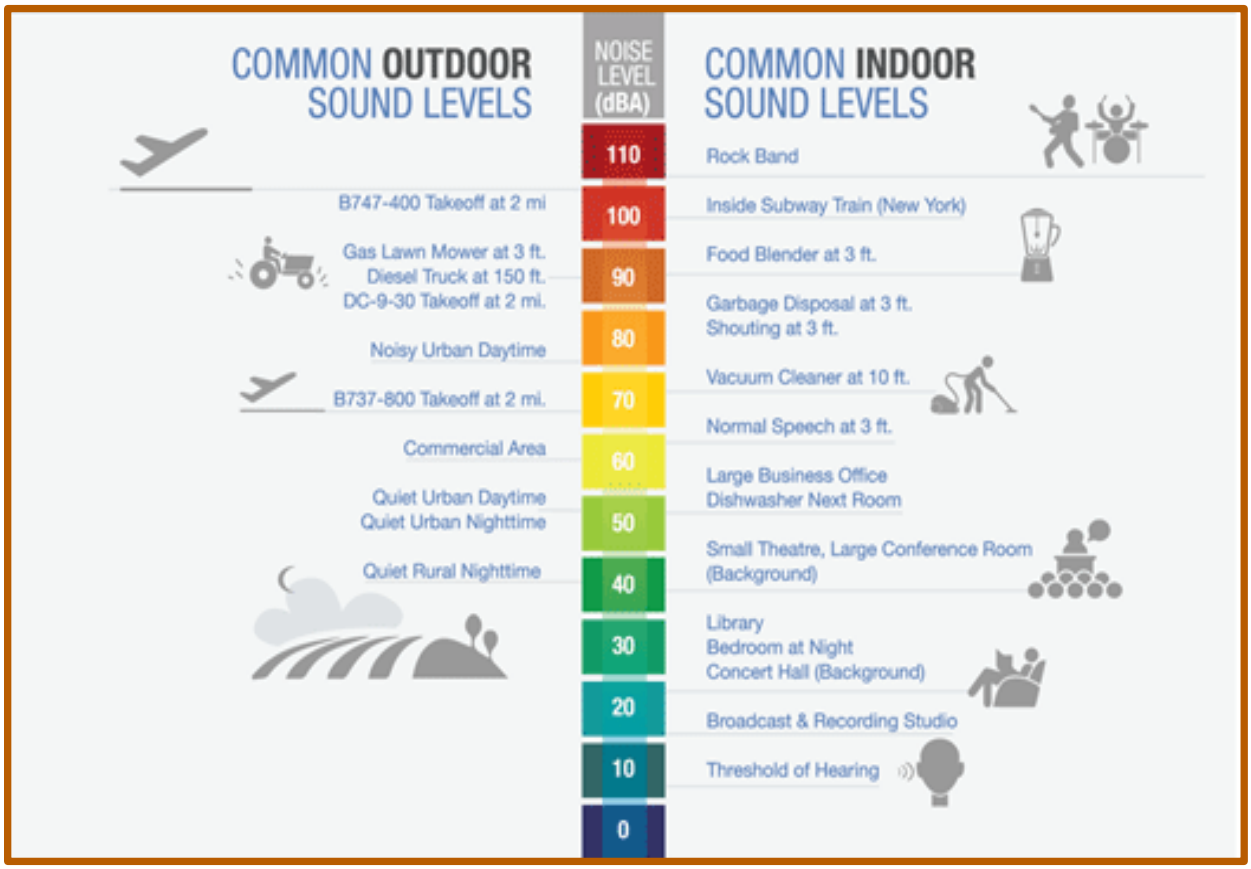
Traffic noise and temporary construction noise can be a consequence of transportation projects. This section is a summary of the traffic noise analysis documented in the *Bishopville Truck Route Project Traffic Noise Analysis* (2021), which can be found in **Appendix J**.

4.4.1 What is noise and how is it measured?

Sound is created when an object moves, causing vibrations or waves in air molecules. SCDOT *Traffic Noise Abatement Policy* defines noise as "unwanted or excessive sounds." Highway traffic noise sources include tire-pavement interaction, as well as the engines and exhaust systems of vehicles. The impact of noise is defined by the amount of interference sound levels have on human activity.

Sound levels are measured in units called decibels (dB). Adjustment for the high- and low-pitched sounds an average person can hear is called "A-weighted levels" or dBA. Highway traffic noise is assessed using dBA measurements. Noise is further described by its average level over time. In noise abatement studies, an "hourly equivalent sound level," or $L_{eq}(h)$, is the constant, average sound level that contains the same amount of sound energy over the period as does the varying levels of actual traffic noise[6] Some common sound levels are illustrated in **Exhibit 4-5**.

Exhibit 4-5. Comparative Noise Levels



Source: Federal Aviation Administration (FAA). (n.d.). *Fundamentals of Noise and Sound*. Retrieved June 2020 from https://www.faa.gov/regulations_policies/policy_guidance/noise/basics.

[6] SCDOT. (2014, September 1). *Traffic Noise Abatement Policy.*

4.4.2 How is noise regulated?

The *Federal-Aid Highway Act of 1970 (FAHA)* mandated FHWA to develop noise standards for identifying noise impacts and evaluating noise abatement for federal projects. *FAHA 1970* stipulated that FHWA cannot approve plans and specifications for federal projects unless adequate noise abatement measures comply with the standards. In response to the *FAHA* requirements, FHWA developed noise regulations or standards. The procedures for highway traffic noise and abatement are presented in 23 CFR Part 772.

The purpose of 23 CFR Part 772 is to:

- Provide procedures for noise studies and noise abatement measures to help protect public health, welfare, and livability;
- Supply Noise Abatement Criteria (NAC); and
- Establish requirements for information to be given to local officials for use in the planning and design of highways.

On June 12, 1995, FHWA issued a memorandum requiring states to adopt written statewide noise policies. These written state policies must be approved by FHWA and demonstrate "substantial compliance" with the FHWA noise regulation (23 CFR Part 772). States have the flexibility in developing their noise policies and documenting the results of noise studies. The proposed project followed SCDOT's *Traffic Noise Abatement Policy*.

FHWA has established a NAC, shown in **Table 4.4-1**, for various land use activities. These activity criteria determine at what point a traffic noise impact would occur. As presented in the SCDOT *Traffic Noise Abatement Policy*, SCDOT adopted these federal NACs as the standard.

A receiver is defined to be a "discrete or representative location of a noise-sensitive area" for any of the land uses listed in **Table 4.4-1**. The receiver is considered impacted if noise levels approach within one dBA, or exceed the NAC, as defined in the SCDOT *Traffic Noise Abatement Policy*. Impacted noise receivers would benefit from noise mitigation measures that lower noise levels. SCDOT uses a substantial increase criterion of 15 dBA or greater to define noise increases from the existing noise level.

Table 4.4-1. FHWA Noise-Abatement Criteria Hourly A-Weighted Sound Level In Decibels

Activity Category	Leq(h)[1]	Evaluation Location	Description of Activity Category
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential.
C[2]	67	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[2]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	—	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	—	--	Undeveloped lands that are not permitted.

Source: FHWA Noise Regulation 23 CFR Part 772
(1) L_{eq} is the equivalent steady-state sound level which in a stated period contains the same acoustic energy as the time-varying sound level during the same period, with $L_{eq}(h)$ being the hourly value of L_{eq}.
(2) Includes undeveloped lands permitted for this activity category.

4.4.3 What methodology was used to estimate noise impacts?

Existing and future noise conditions were determined through field measurements and FHWA's Traffic Noise Model (TNM) version 2.5. TNM takes factors from current and future traffic volumes and scenarios, topography, buildings, and roadways into account. These factors create a three-dimensional model that calculates noise levels for an entire area and can predict both existing and future noise levels using various criteria and information included in the model.

The first step in noise analysis is measuring ambient noise levels at various locations in the study area. Noise from natural and mechanical sources in addition to human activity typically constitutes the ambient noise in an area. Ambient noise level measurements quantify the existing acoustic environment and provide a baseline for assessing the impact of future noise levels to the receptors in the vicinity of the proposed action resulting from increased traffic and the new roadway alignment. Field measurements assist in evaluating the level of noise reduction that may be provided by existing elements such as fences and scattered vegetation that cannot be precisely modeled by the computer. This information is an important consideration in determining noise impacts and the evaluation of related noise abatement measures for the project.

Noise measurements were collected on November 6 and 8, 2019 to determine existing noise levels, validate the TNM model, and define the baseline conditions for noise-sensitive areas where traffic is not a dominant noise source. Noise measurement locations consisted of 12 locations (**Figure 4.4-1**): five near the existing roadway network and seven where roadway traffic is not a major noise source. The noise readings were used to determine the ambient noise levels in those seven Common Noise Environment (CNE) areas (**Figure 4.4-1**). In accordance with SCDOT policy, noise measurements were taken approximately 30 meters (100 feet) from the centerline of the existing roadway if possible, and in areas of human/recreational activity for areas where roadway traffic is not a dominant source.

Outdoor measurements were taken using a Type II SoundPro DL sound level meter. The noise meters were placed five feet above the ground level. Noise levels were measured for 30 minutes at each ambient location and 15 minutes for each model location where traffic data was collected. The equivalent steady-state sound level (L_{eq}) was collected for each site logged in one-minute intervals. One-minute data logging helps to determine any aberrant noise events at each site. The traffic count was categorized into automobiles, medium trucks, and heavy trucks. No interior noise level measurements were performed. Measured noise levels ranged from 55.6 dBA to 67.5 dBA.

Traffic data were obtained from official SCDOT vehicle counts and the *Bishopville Truck Route Project Traffic Analysis Study* (2021). Traffic volumes for existing conditions (2015) and the build alternatives (2045) were provided as Average Annual Daily Traffic (AADT). Design Hourly Volumes (DHVs) were calculated for the TNM scenarios by multiplying the existing and projected AADT volumes by the K Factor established for the study area. The DHVs were split 50/50 for each roadway direction. The DHVs for each direction were then grouped by vehicle classification (automobiles, medium trucks, and heavy trucks) for the existing and future conditions. This was done by multiplying the DHVs by the percentage of each vehicle classification. The DHVs were then divided by the number of travel lanes for each direction and assigned to the appropriate TNM roadway segment.

Although medium trucks were observed during field data collection, all trucks were assumed to be heavy trucks given the SCDOT official traffic counts reported all heavy-duty trucks. By assuming all heavy trucks, the predicted noise represents a “worst-case scenario.” More information can be found in the *Bishopville Truck Route Project Traffic Noise Analysis* (2021) in **Appendix J**.

4.4.4 What are the existing noise conditions?

The existing land use is predominately agricultural (Category F) as well as residential properties (Category B), parks and schools (Category C), medical facilities, and places of worship (Category D). For the analysis, 119 modeled noise-sensitive receivers were assigned a NAC Category B, C, D, or E based on aerial photography and field visits. Traffic noise impacts will be determined for each existing noise-sensitive receptor and its associated land use type by comparing the predicted noise levels with the FHWA NAC. The 119 receivers used in the TNM 2.5 models are shown in **Figure 4.4-2a-2d**. None of the existing TNM receivers are currently exceeding NAC levels.

4.4.5 What noise impacts would result from the project?

Traffic noise impacts occur when the predicted traffic noise levels either approach (within 1-dBA of the NAC for each land use category) or exceed the NAC, or when the predicted noise levels substantially exceed the existing noise levels. According to the SCDOT *Traffic Noise Abatement Policy*, a 15-dBA or greater increase is deemed to be a "substantial increase."

No-Build Alternative

The No-Build Alternative would result in impacts on a NAC Category B residential receiver and a NAC Category E business receiver, which are both located along Main Street (US 15). If the Bishopville Truck Route Project is not built, noise levels are projected to be between 35.9 and 71.4 dBA by 2045. The residential receiver's (REC-88) noise levels would approach or exceed the NAC as a result of traffic growth from 2015 to 2045. The business receiver's (REC-104) noise levels would approach or exceed the NAC as a result of traffic growth from 2015 to 2045.

Build Alternatives

No traffic noise impacts are anticipated for any of the build alternatives. The estimated noise levels of the build alternatives in 2045 range from 38.2 and 71.8 dBA. No receivers would have noise levels approach or exceed the NAC (66 dBA for residences, medical offices, churches, and adult daycares; and 71 dBA for businesses or other commercial properties). **Table 4.4-2** presents a summary of impacts based on the TNM 2.5 noise modeling results. More detailed information can be found in the *Bishopville Truck Route Project Traffic Noise Analysis* (2021) in **Appendix J**.

Table 4.4-2. Summary of Noise Impacts by Alternative

Activity Category	Existing	No Build	Build Alternatives
A	—	—	—
B	0	1	0
C	0	0	0
D	0	0	0
E	0	1	0
F	—	—	—
G	—	—	—
TOTAL	**0**	**2**	**0**

Source: (2021). *Bishopville Truck Route Project Traffic Noise Analysis*.

4.4.6 What happens when noise impacts are identified?

When a receiver is impacted by traffic noise, noise abatement measures must be considered. A noise abatement measure is any positive action that reduces the impacts of traffic noise on an activity area. This can include traffic management, alignment alterations, buffer zones, providing noise insulation and/or air conditioning of buildings, and construction of a noise barrier.

Before the recommendation of noise abatement measures, the feasibility and reasonableness of the abatement measures must be determined per the SCDOT *Traffic Noise Abatement Policy*. The feasibility of noise abatement measures is based on acoustic feasibility, where a noise reduction of at least 5 dBA must be achieved for at least 75% of the receivers that are determined to be impacted. The noise abatement measures must also have engineering feasibility where factors that include topography, safety, drainage, utilities, maintenance, access, and height of the noise abatement measure would not limit the ability to achieve noise reduction goals.

SCDOT established three mandatory reasonable factors that must be met for a noise abatement measure to be considered reasonable: (1) the viewpoints of the property owners and residents of the benefitted receivers, (2) cost-effectiveness, and (3) the noise reduction design goal. Per 23 CFR Part 772, the following factors must be achieved for noise barriers to be deemed reasonable. More detailed information can be found in the *Bishopville Truck Route Project Traffic Noise Analysis* (2021) in **Appendix J**.

4.4.7 How will noise impacts be mitigated?

Upon FHWA approval of the combined Final Environmental Statement/Record of Decision (FEIS/ROD), SCDOT will comply with 23 CFR 772.17: a) To minimize future traffic noise impacts on currently undeveloped lands of Type I projects, a highway agency [SCDOT] shall inform local officials within whose jurisdiction the highway project is located of (1) noise compatible planning concepts, (2) the best estimation of the future design year noise levels at various distances from the edge of the nearest travel lane, and (3) non-eligibility for Federal-aid participation for a Type II project; and b) If a highway agency [SCDOT] chooses to participate in a Type II noise program or to use the date of development as one of the factors in determining the reasonableness of a Type I noise abatement measure, the highway agency [SCDOT] shall have a statewide outreach program to inform local officials and the public of the items in 23 CFR 772.17(a)(1) through (3).

Noise abatement measures (e.g., noise walls, earthen berms, and depressed roadway segments) reflect or absorb highway traffic noise and reduce it to acceptable levels, and are considered when noise levels at receivers approach or exceed the FHWA NAC or when predicted noise levels substantially exceed existing noise levels. The results of the noise analysis found that there would be no traffic noise impacts as a result of the Bishopville Truck Route Project, therefore no noise abatement measures are recommended.

4.4.8 How will construction noise impacts be mitigated?

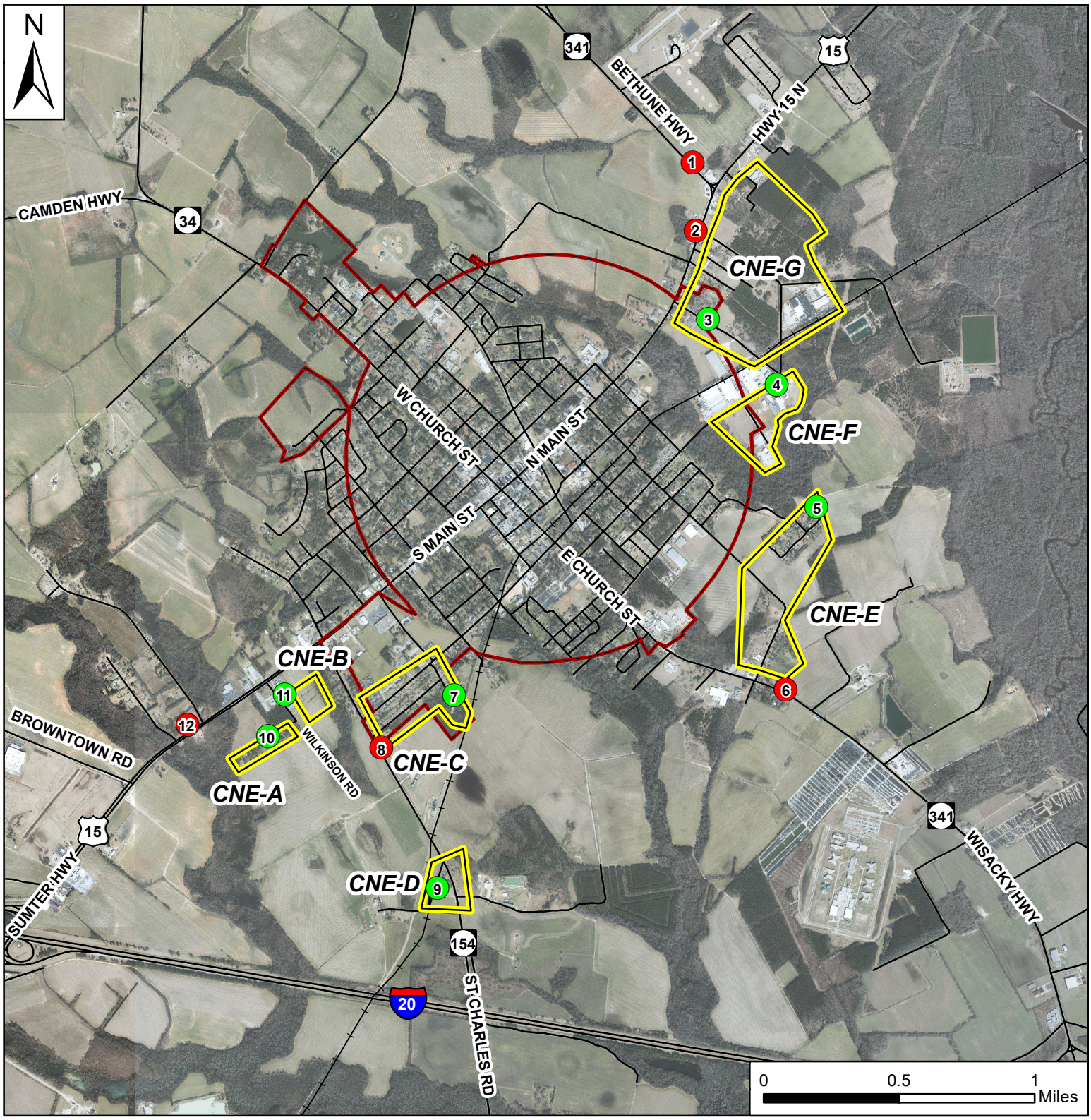
Increased noise is anticipated during construction of the project. The increased noise will be temporary and localized to the construction area. The major noise sources from construction will be earth removal, paving, grading, hauling, and pile-driving. Construction noise would be subject to compliance with local noise regulations/ordinances. Powered construction equipment shall not be operated during the traditional evening and/or sleeping hours within 150 feet of a noise-sensitive site (e.g., residences, schools, preschools, daycares, places of worship, hospitals, retirement homes, parks, campgrounds, and apartment complex pools), to be decided either by local ordinances and/or agreement with the SCDOT. The public would be notified and given the opportunity to provide comments before the use of powered construction equipment being operated adjacent to residential communities during the evening and/or sleeping hours.

Low-cost and easily implemented construction noise control measures should be incorporated to the extent possible. These measures may include work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of “tailgate banging,” ambient-sensitive backup alarms, portable noise barriers and other equipment-quieting devices, construction noise complaint mechanisms, and consistent and transparent communication with the community. See **Section 4.12** for more information on construction-related noise impacts and mitigation.

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Ambient Noise Measurement Location

Model Noise Measurement Location

Road

SCRF Railroad

Common Noise Environment (CNE)

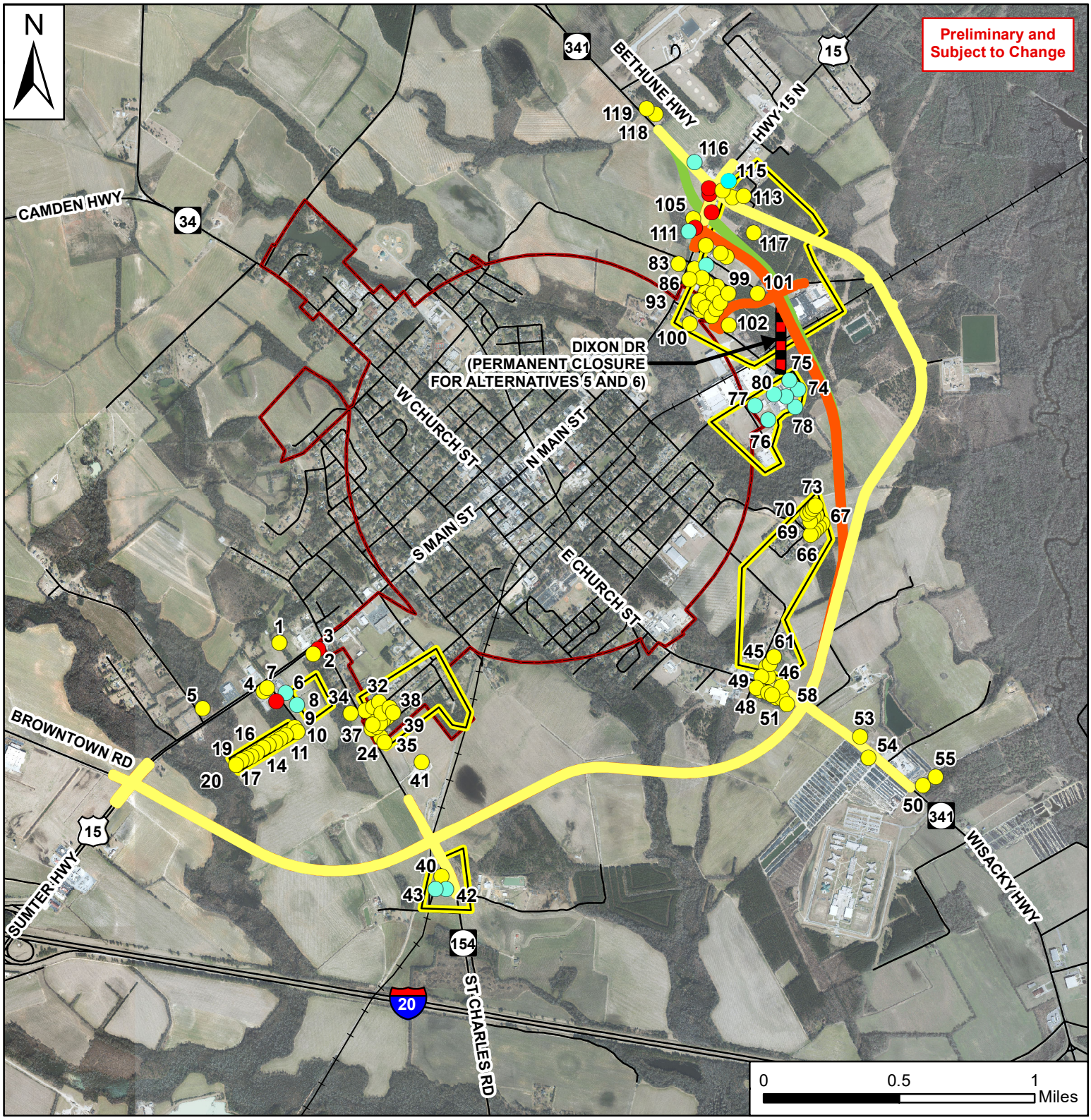
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Noise Measurement Locations

Figure 4.4-1

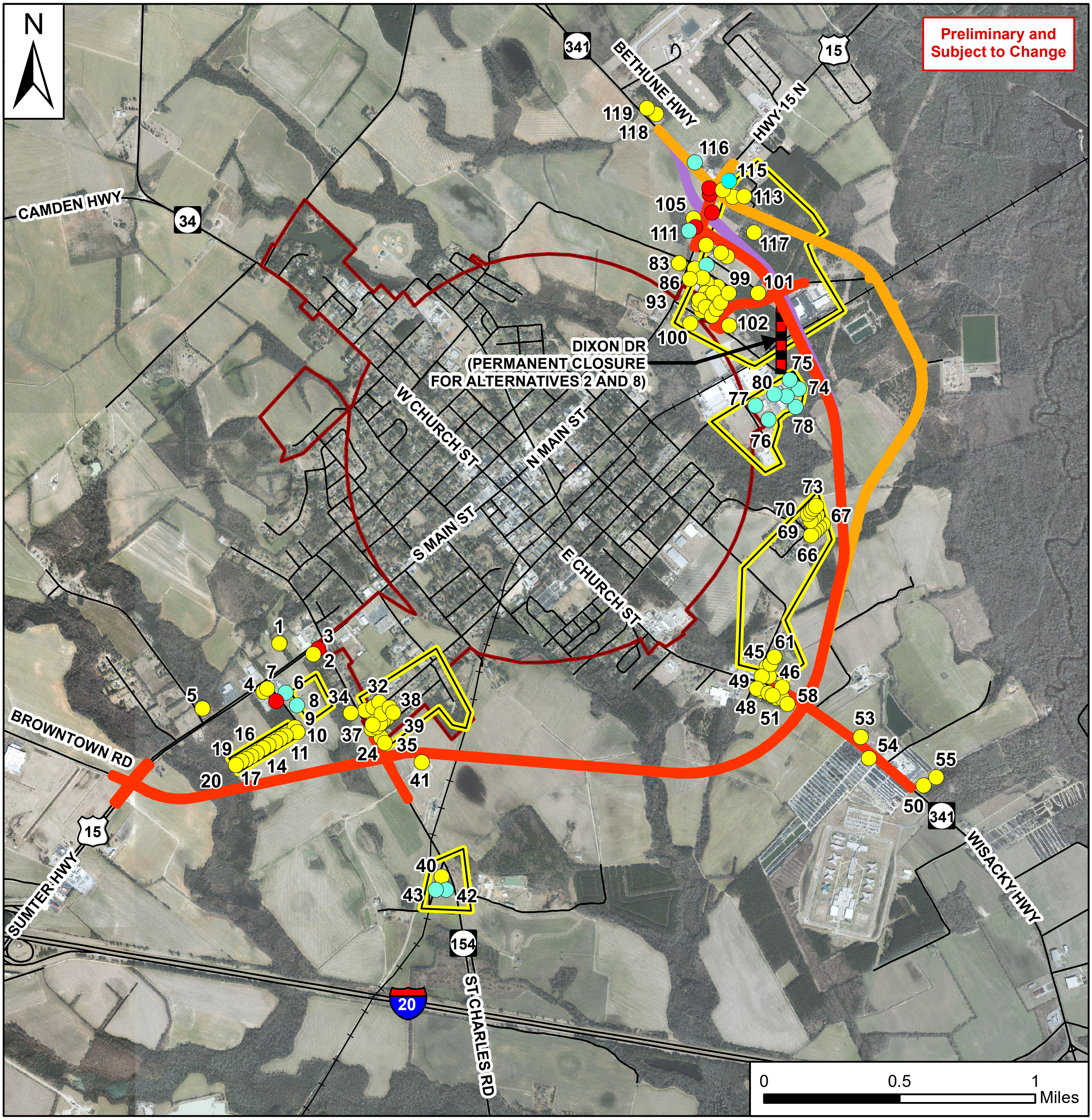


Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Traffic Noise Model Receivers – Alternatives 1, 5, and 6

Figure 4.4-2a



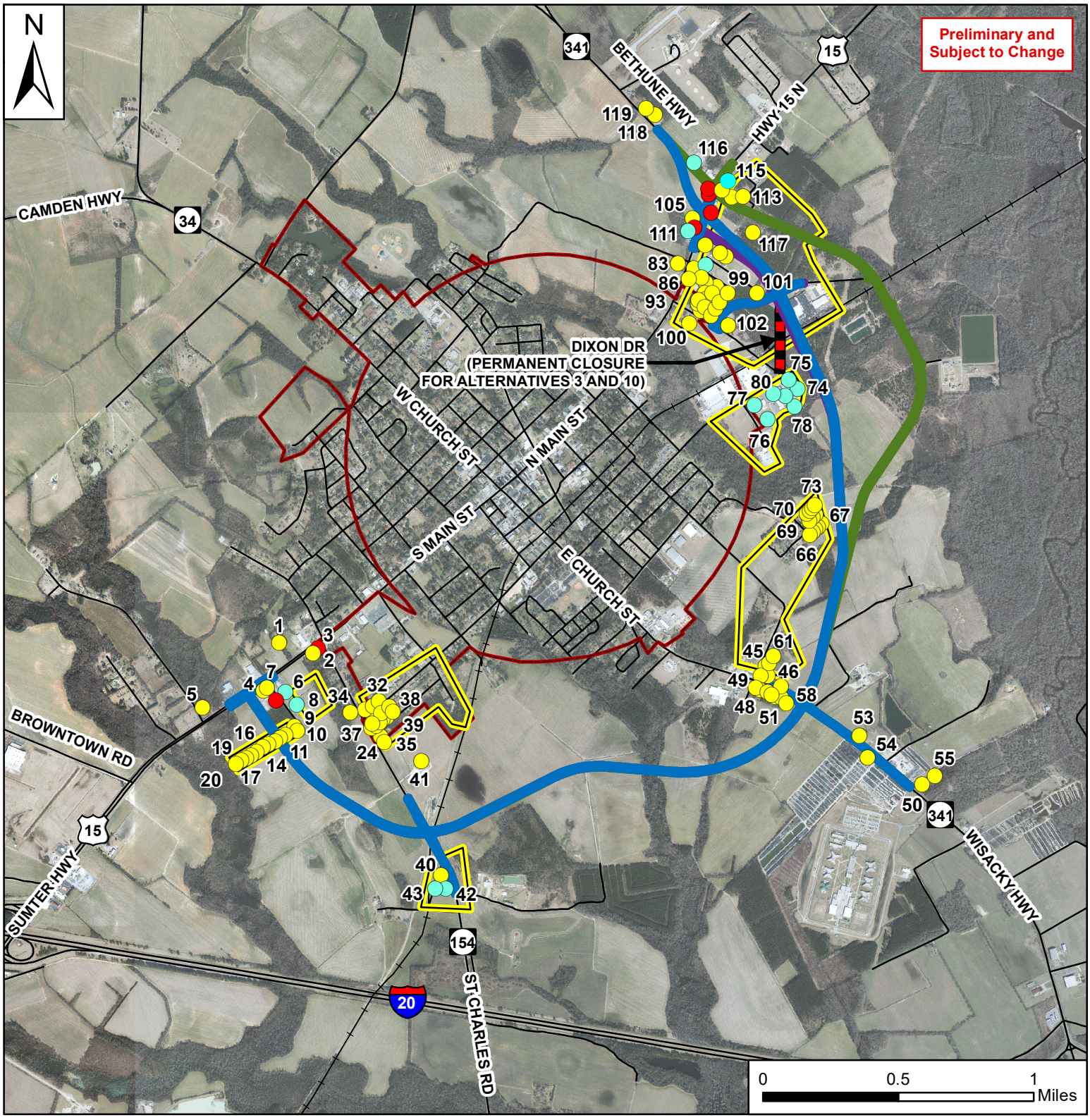
Noise Abatement Criteria B	Alternative 2	
Noise Abatement Criteria C	Alternative 7	
Noise Abatement Criteria E	Alternative 8	
Permanent Road Closure	Common Noise Environment	
Road	Municipal Boundary	
SCRF Railroad		

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

Traffic Noise Model Receivers – Alternatives 2, 7, and 8

Figure 4.4-2b



Noise Abatement Criteria B
Noise Abatement Criteria C
Noise Abatement Criteria E
Permanent Road Closure
Road
SCRF Railroad

Alternative 3
Alternative 9
Alternative 10
Common Noise Environment
Municipal Boundary

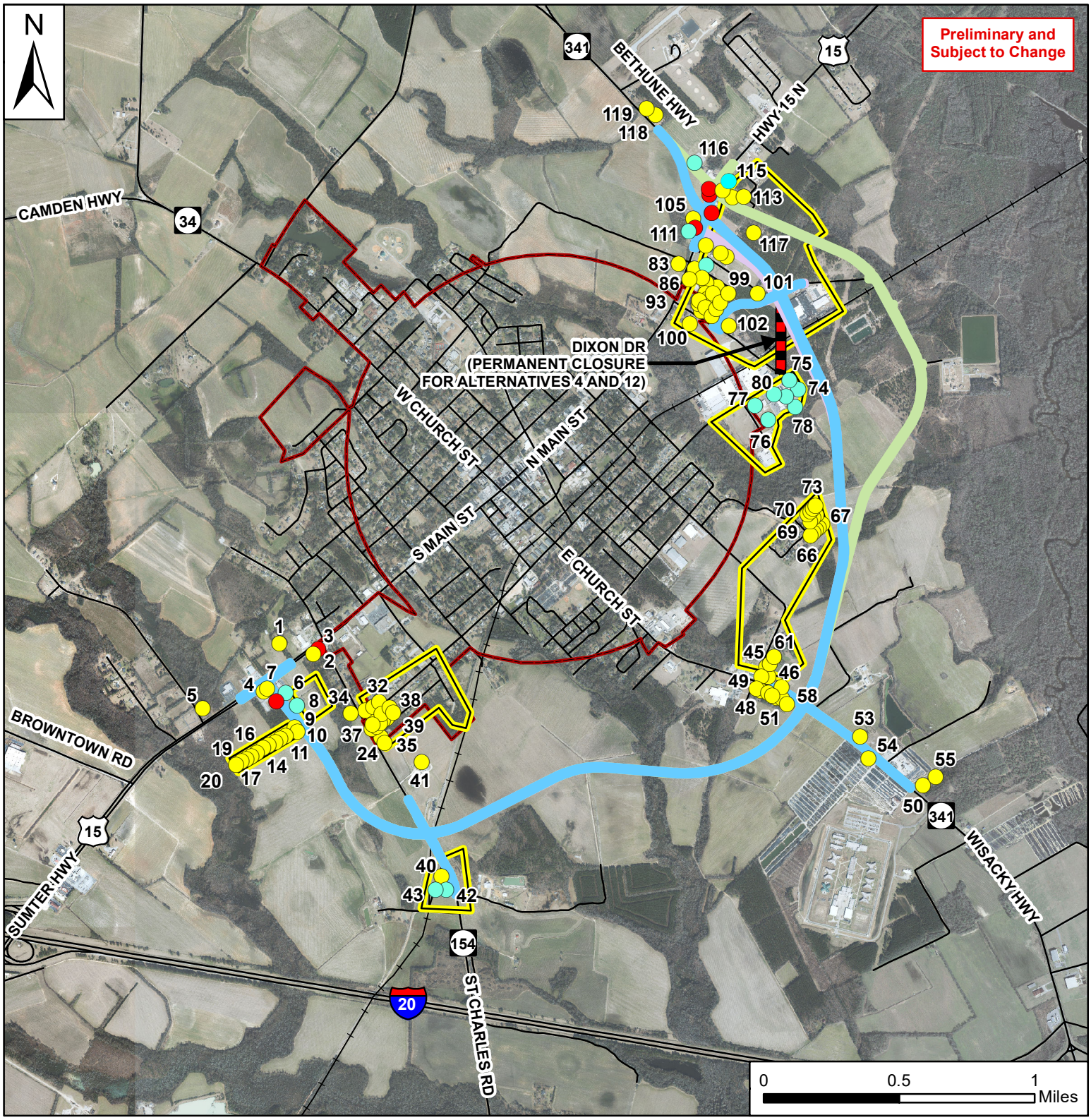
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Traffic Noise Model Receivers – Alternatives 3, 9, and 10

Figure

4.4-2c



- Noise Abatement Criteria B
- Noise Abatement Criteria C
- Noise Abatement Criteria E
- Permanent Road Closure
- Road
- SCRF Railroad
- Alternative 4
- Alternative 11
- Alternative 12
- Common Noise Environment
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Traffic Noise Model Receivers – Alternatives 4, 11, and 12

Figure

4.4-2d

4.5 Air Quality

Controlling air toxic emissions became a national priority with the passage of the *Clean Air Act* (*CAA*) amendments in 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in its latest rule on the *Control of Hazardous Air Pollutants from Mobile Sources* and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS). EPA refers to these compounds as Mobile Source Air Toxics (MSAT). In compliance with the *CAA* and its amendments, related Federal regulations, and FHWA Guidance, this section discusses the conformity status and potential air quality impacts of the Bishopville Truck Route Project. This section summarizes the *Bishopville Truck Route Project Air Quality Technical Memorandum* (2021), which can be found in **Appendix K**.

4.5.1 How is air quality regulated?

The *CAA*, as amended, is the comprehensive federal law that regulates air emissions. Among other things, this law requires the United States Environmental Protection Agency (EPA) to establish national standards for ambient air quality to protect public health and the environment. These standards are known as the National Ambient Air Quality Standards (NAAQS). Additionally, the *CAA* Amendments of 1990 listed 188 Hazardous Air Pollutants (HAPs) and addressed the need to control toxic emissions from transportation. *Section 202(l) of the CAA* required EPA to set standards to control hazardous air pollutants from motor vehicles, motor vehicle fuels, or both. EPA published a Mobile Source Air Toxic (MSAT) rule under this authority in March 2001 (amended in 2007).

4.5.2 What are the National Ambient Air Quality Standards?

The EPA established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants. Compliance with the NAAQS is measured via a national network of air quality monitors. The criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2), and lead (Pb). These criteria pollutants are described in more detail below.

States are divided into geographical areas that are classified as either nonattainment, maintenance, or attainment for air quality. A geographic area that meets or does better than the NAAQS is called an attainment area, and an area that does not meet this standard is called a nonattainment area. In nonattainment areas, the EPA requires states to develop a *State Implementation Plan* (SIP) for Air Quality to address goals for attaining NAAQS. Each plan can include measures to reduce transportation pollutant emissions. In nonattainment areas, once the concentrations of specific pollutants are reduced enough to be within the standards, the area can request re-designation.

The EPA delegates authority to the South Carolina Department of Health and Environmental Control (SCDHEC) for monitoring and enforcing air quality regulations in the state. The South Carolina SIP, developed in accordance with the *CAA*, would contain any requirements regarding transportation control measures.

FHWA is responsible for ensuring that a proposed project conforms to the SIP. A transportation conformity analysis to ensure that those transportation activities that receive federal funding and approval are consistent with state and federal air quality goals (40 CFR Parts 51 and 93). As part of transportation conformity, emissions analyses must be conducted for every proposed transportation plan, program, or project in a nonattainment area. A nonattainment area is defined as any geographic region that has been designated as nonattainment for any pollutant listed in the NAAQS (40 CFR 93.101).

4.5.3 What pollutants are regulated and how?

The EPA established the NAAQS to protect public health, safety, and welfare from known or anticipated effects of air pollutants. The SCDHEC Bureau of Air Quality is responsible for regulating and ensuring compliance with the *CAA*. The six criteria pollutants are described below and the NAAQS limits for these pollutants are presented in **Table 4.5-1**. **Primary standards** are set to protect public health, including "sensitive" populations such as asthmatics, children, and the elderly. **Secondary standards** are designed to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Carbon Monoxide (CO)

CO forms when carbon is not completely burned in fuel. It is an odorless and colorless gas that is mainly formed from vehicle exhaust. Breathing CO reduces the body's ability to deliver oxygen to vital organs and can affect the heart, lungs, and central nervous system. Inhaled in high amounts, it can cause poisoning or death.

Lead (Pb)

Lead is usually released into the environment from processing metals. Utilities, waste incinerators, and lead-acid battery manufacturers are sources of lead. It can cause damage to major organs such as the brain, liver, and kidneys, and can cause seizures, mental disorders, reproductive problems, high blood pressure, anemia, and osteoporosis.

Nitrogen Dioxide (NO_2)

Nitrogen dioxide is an odorless and colorless gas that comes from various sources such as vehicle, industrial, and utility emissions. It is a component of ozone, which causes numerous respiratory problems.

Ozone (O_3)

Ozone is created when nitrogen oxide compounds mix with volatile organic compounds in the presence of sunlight. Sources of the compounds creating ozone include vehicle and industrial emissions, gasoline vapors, and chemical solvents. Ozone causes respiratory problems such as decreased lung function, asthma, wheezing, coughing, pain when breathing, and higher susceptibility to respiratory illnesses such as pneumonia and bronchitis.

Particulate Matter ($PM_{2.5}$ and PM_{10})

Particulate matter forms when small solid particles combine with liquid droplets to form dust, dirt, haze, soot, or smoke. These can be emitted from primary sources such as unpaved roads, construction sites, fields, or smokestacks. They can also be emitted as a result of secondary reactions of gases released from automobiles and industrial plants. Particulate matter causes a variety of respiratory problems, from asthma and bronchitis to decreased lung capacity and function. If particulate matter is very small, it can be transferred to the cardiovascular system and cause irregular heartbeat and even non-fatal heart attacks.

Sulfur Oxides (SO_2)

Sulfur dioxide is formed when fuel such as coal and oil is burned, and sulfur is released into the atmosphere and mixed with oxygen. The main sources of sulfur dioxide include fuel-burning utility plants, petroleum refineries, large ships and locomotives, and metals processing plants. Sulfur dioxide can cause respiratory illnesses such as asthma, decreased lung function, and susceptibility to other illnesses such as pneumonia and bronchitis. It can also aggravate existing heart diseases.

Table 4.5-1. National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		Primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead (Pb)		Primary and Secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		Primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and Secondary	1 year	53 ppb (2)	Annual mean
Ozone (O_3)		Primary and Secondary	8-hour	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particulate Matter (PM)	$PM_{2.5}$	Primary	1 year	12.0 µg/m^3	Annual mean, averaged over 3 years
		Secondary	1 year	15.0 µg/m^3	
		Primary and Secondary	24-hour	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	Primary and Secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		Primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: (2021). *Bishopville Truck Route Project Air Quality Technical Memorandum.*
Abbreviations: ppb = parts per billion, ppm = parts per million, µg/m^3 = micrograms per cubic meter
Primary standards are set to protect public health. Secondary standards are designed to protect public welfare.
(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.
(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.
(3) Final rule signed October 1, 2015., and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O_3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.
(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its *State Implementation Plan* to demonstrate attainment of the required NAAQS.

4.5.4 What is Lee County's air quality status?

According to EPA's *Nonattainment Areas for Criteria Pollutants* (Green Book) (2020), Lee County is in attainment for all NAAQS pollutant standards. Therefore, no further action to evaluate air quality is required for the Bishopville Truck Route Project. For more information, the *Bishopville Truck Route Project Air Quality Technical Memorandum* (2021) can be found in **Appendix K**.

Air Quality

Lee County is in attainment with the EPA's National Ambient Air Quality Standards.

4.5.5 What about mobile source air toxics?

Controlling air toxic emissions became a national priority with the passage of the *CAA* amendments in 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in its latest rule on the Control of Hazardous Air Pollutants from Mobile Sources[7] and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS).[8] EPA refers to these compounds as Mobile Source Air Toxics (MSAT). In addition, the EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 2011 National Air Toxics Assessment (NATA).[9] These are acetaldehyde, acrolein, benzene, 1,3-butadiene, diesel PM, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While the FHWA considers these the priority MSAT, the list is subject to change and may be adjusted in consideration of future EPA rules.

The 2007 EPA rule for MSAT requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using the EPA's Motor Vehicle Emissions Simulator (MOVES) 2014 model, even if vehicle activity (vehicle miles traveled [VMT]) increases by 45% as assumed, a combined reduction of 90% in the total annual emission rate for the priority MSAT is projected from 2010 to 2050.[10]

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making in the context of the *National Environmental Policy Act (NEPA).*

Nonetheless, air toxics concerns continue to be raised on highway projects during the *NEPA* process. Even as the science emerges, the public and other agencies expect the FHWA to address MSAT impacts in its environmental documents. The FHWA, EPA, the Health Effects Institute (HEI), and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field.

[7] Federal Register, Volume 72, Number 37. (February 26, 2007).
[8] Environmental Protection Agency (EPA). *Integrated Risk Information System (IRIS).* Retrieved January 2020 from http://www.epa.gov/iris.
[9] Federal Highway Administration (FHWA). (2016, October 18). *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA. Documents.* Retrieved January 2020 from https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/.
[10] Ibid

4.5.5.1 *NEPA* Context

FHWA has provided interim guidance on addressing MSAT for *NEPA* analysis in the *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents* (2016). Depending on certain project circumstances, FHWA has identified three levels of analysis for MSAT:

1. No analysis for projects with no potential for meaningful MSAT effects.
2. Qualitative analysis for projects with low potential MSAT effects.
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

Because the Bishopville Truck Route would result in changes in traffic volume and has a maximum design year (2045) AADT of less than 140,000, it would fall under the second analysis category. Due to the lack of technical resources, a qualitative impact evaluation is provided, following FHWA guidance and the Council on Environmental Quality (CEQ) guidance (specifically 40 CFR 1502.22(b)).

4.5.5.2 Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the *CAA* and its amendments and have specific statutory obligations concerning hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the IRIS, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects."[11] Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the HEI. Several HEI studies are summarized in Appendix D of the *FHWA Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents* (2016). Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings, cancer in animals, and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations[12] or in the future as vehicle emissions substantially decrease.

[11] Environmental Protection Agency (EPA). *Integrated Risk Information System (IRIS).* Retrieved January 2020 from http://www.epa.gov/iris.
[12] Health Effects Institute (HEI). (2007, November). *Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects*. Retrieved May 2020 from https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects.

The methodologies for forecasting health impacts include emissions modeling, dispersion modeling, exposure modeling, and then the final determination of health impacts with each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 years) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that timeframe since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways, to determine the portion of time that people are exposed at a specific location, and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI.[13] As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that concerning diesel engine exhaust, "[t]he absence of adequate data to develop a sufficiently confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk." [14]

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the *CAA* to determine whether more stringent controls are required to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries.

The decision framework is a two-step process. The first step requires the EPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than one in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than one in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million.

In a June 2008 decision, the US Court of Appeals for the District of Columbia Circuit upheld the EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable.[15]

[13] HEI. (2007, November). *Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects.* Retrieved May 2020 from https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects.
[14] EPA, IRIS. (2003, February 28). *Diesel Engine Exhaust, Section II.C.* Retrieved May 2020 from https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0642_summary.pdf.
[15] US Court of Appeals. (2008, June 8). *Natural Resources Council and Louisiana Environmental Action Network, Petitioners v. Environmental Protection Agency, Respondent. US Court of Appeals.* Retrieved May 2020 from https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/$file/07-1053-1120274.pdf.

Differences in health impacts between alternatives are difficult to predict because of limited methodologies for forecasting health impacts. Due to the uncertainty of predicting health impacts, the results of such assessments would not be useful to decision-makers, who would need to weigh these uncertainties against quantitative analyses used to predict project benefits such as reducing downtown truck traffic and improving aesthetics. Weighing the uncertain health impact predictions against quantitative analyses would not be a beneficial comparison.

4.5.6 How would the project impact air quality?

4.5.6.1 No-Build Alternative

With the No-Build Alternative, traffic congestion and vehicle idling may increase, which could adversely impact local air quality.

4.5.6.2 Build Alternatives

The proposed project is consistent with the South Carolina SIP regarding the continuing attainment of the NAAQS. Presently, Lee County meets all air quality standards for automobile-related pollutants. The SCDHEC Bureau of Air Quality has determined that transportation control measures (TCMs) are not required to maintain the area's air quality.

In general, the project should alleviate the traffic congestion along Main Street (US 15) in downtown Bishopville, which would have positive effects on the region's air quality as a result of less congestion and idling vehicles. Additionally, the Santee-Lynches Regional Council of Governments (SLRCOG) has entered into Early Action Compacts to set goals for cleaner air in the region. This project also has been included in the South Carolina Statewide Transportation Improvement Program (STIP), which is reviewed for air quality compliance. With the Early Action Compacts in place and standard review of the project as part of the South Carolina STIP, the project is not anticipated to put the project area into nonattainment or maintenance for any of the NAAQS.

4.5.6.3 Mobile Source Air Toxics

Mobile Source Air Toxics

The project is expected to reduce the MSAT emissions in downtown Bishopville by rerouting truck traffic.

The amount of MSAT emitted for each of the build alternatives considered for the project would be proportional to the amount of VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT for a proposed project on a new alignment such as the Bishopville Truck Route would likely be greater than the VMT with the No-Build scenario because of the longer route.

Regardless of the alternative chosen, emissions will likely be lower than present levels in the design year (2045) as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by 90% between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great that MSAT emissions in the project area are likely to be lower in the future in nearly all cases.

If the project is implemented, by the design year (2045), it is expected there would be reduced MSAT emissions in the Bishopville downtown area, as compared to the No-Build Alternative, due to the reduced VMT associated with fewer vehicles traveling through downtown and due to EPA's MSAT reduction programs.

There may be localized areas where ambient concentrations of MSAT could be higher than the No-Build Alternative. The localized increases in MSAT emissions would likely be most pronounced along the new roadway sections that would be built at Main Street (US 15) and Bethune Highway/Wisacky Highway (SC 341) for Build Alternatives 1-12. However, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.

With a new roadway, the localized level of MSAT emissions for the build alternatives could be higher relative to the No-Build Alternative, but this will most likely be offset by higher speeds and reduced congestion along Main Street (which are associated with lower MSAT emissions). Additionally, MSAT will be lower in other locations when traffic shifts to the new roadway. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that, in almost all cases, will cause region-wide MSAT levels to be lower than today.

4.5.6.4 Short-Term Construction Impacts

Air quality impacts may occur during construction due to dust and fumes from equipment, earthwork, and vehicles accessing the construction site. Air quality impacts may also result from an increase in vehicle emissions from traffic delays due to construction activities. Construction activities could include material staging at intersection locations, delivery of equipment and materials, and longer waiting times at intersections. Construction-related effects are discussed further in **Section 4.12**.

4.5.7 How would air quality impacts be mitigated?

Best management practices (BMPs) that limit localized construction-related dust generation are described in the SCDHEC *BMP Handbook* (2014). These methods include vegetative cover, mulch, spray-on adhesive, calcium chloride applications, water sprinkling, stone, tillage, wind barriers, and construction of temporary graveled entrances/exits to the construction site. The contractor will ensure all construction equipment is properly tuned and maintained and will minimize idling time to save fuel and reduce emissions.

Per Section 107.07 of SCDOT *Standard Specifications for Highway Construction* (2007), the contractor would comply with all South Carolina Air Pollution Control Laws, Regulations, and Standards. The contractor would also comply with the county and other local air pollution regulations. Any burning of cleared materials would be conducted following applicable state and local laws, regulations, and ordinances, and the regulations of South Carolina's SIP for air quality, in compliance with *Regulation 62.2, Prohibition of Open Burning*.

4.6 Water Resources

The natural environment includes water resources such as rivers, lakes, streams, and wetlands. Impacts on natural resources, including water resources, are often under the jurisdiction of state and federal agencies that must ensure the protection of these resources through specific regulations. This section includes an overview of water resources and the assessment of potential project impacts on these resources.

4.6.1 How are water resources regulated?

4.6.1.1 The Clean Water Act

The *Clean Water Act (CWA) of 1972,* as amended, provides the authority to the EPA and the US Army Corps of Engineers (USACE) to establish water quality standards, control discharges into surface water and groundwater, develop waste treatment management plans and practices, and issue permits for discharges (Section 402) and dredged or fill material (Section 404). Water resources protected under the *CWA* include most surface waters, such as lakes, rivers, ponds, streams, and wetlands. In South Carolina, the EPA has designated SCDHEC responsible for monitoring and regulating water quality. Water quality can be impacted by factors including pesticides, heavy metals, livestock waste, litter, oils and grease, and other chemicals.

4.6.1.2 Wetlands and Waters of the United States

The USACE regulates the "waters of the United States" (WOTUS), including wetlands. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.[16] The authority for the USACE to regulate impacts on WOTUS comes from *Section 404 of the CWA.*

Water Quality Regulators

The USACE and the SCDHEC are primarily responsible for regulating water resources in South Carolina.

Jurisdictional wetlands are defined as areas that display positive evidence of three environmental parameters, including the dominance of hydrophytic vegetation, wetland hydrology, and hydric soils.[17] Jurisdictional WOTUS are defined by 33 CFR 328.3(a) and regulated by *Section 404 of the CWA* (33 USC 1344), which is administered and enforced by the USACE.

Jurisdictional WOTUS are defined in 33 CFR 328.3(a) as:

1. The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;
2. Tributaries;
3. Lakes and ponds, and impoundments of jurisdictional waters; and
4. Adjacent wetlands.

[16] Environmental Laboratory. (1987, January). *1987 Corps of Engineers Wetlands Delineation Manual*. US Army Corps of Engineers, Waterways Experiment Station.
[17] Ibid

WOTUS do not include previously converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the *CWA*, the final authority regarding *CWA* jurisdiction remains with EPA. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the *CWA*, are not WOTUS.

One method of assessing the value and function of wetlands is in terms of wildlife habitat. The US Fish and Wildlife Service (USFWS) Resource Category criteria are outlined in the USFWS Mitigation Policy, 46 FR 7644-7663. Resource categories and mitigation planning techniques are assigned based on the following criteria:

Category 1 - Communities of one-of-a-kind high value to wildlife, unique and irreplaceable on a national or eco-regional basis, habitat is not replaceable in-kind based on present-day scientific and engineering skills within a reasonable time frame.

Category 2 - Communities of high value to wildlife, which are relatively scarce or are becoming scarce on a national, or eco-regional basis, habitat can be replaced in kind within a reasonable time frame based on present-day scientific and engineering skills.

Category 3 - Community types of high to medium wildlife value which are relatively abundant on a national basis, out-of-kind replacement is allowable if a tradeoff analysis demonstrates equivalency of substituted habitat type and/or habitat values. These sites are often in conjunction with a replenishing source.

Category 4 - Community types of low to medium wildlife value, generally losses will not have a substantial adverse effect on important fish and wildlife resources. These sites have often been affected by the present roadway or human disturbances and are usually isolated.

4.6.2 What water resources are in the project study area?

Existing water resources have been divided into three broad categories:

- Groundwater
- Surface Waters
- Wild and Scenic Rivers

4.6.2.1 Groundwater

Groundwater is the water found below Earth's surface in soil and fractures of rock formations. The groundwater aquifers in this region are primarily unconsolidated sediments, such as sand, silts, and clays, with some sedimentary rock. Of the 10 groundwater uses reported in South Carolina in 2018, Lee County water withdrawal was only reported for irrigation and public water supply.[18] **Table 4.6-1** identifies the groundwater resources reported for Lee County in 2018.

The project study area is serviced by the City of Bishopville for its drinking water supply, which is sourced from the Middendorf Aquifer. The Middendorf Aquifer supplies the majority of the Pee Dee region. Because of the depth of the aquifer, contamination due to the proposed project is not anticipated. If a petroleum product or other soluble material is leaked or spilled during construction, best management practices would be in place to manage the leak or spill.

[18] SCDHEC. (2019). *South Carolina Water Use Report 2018 Summary*. Bureau of Water.

Table 4.6-1. Lee County Groundwater

Use Type	Groundwater Use (millions of gallons)
Irrigation	1,635.81
Water Supply	489.69
Total	**2,125.50**

Source: SCDHEC. (2019). *South Carolina Water Use Report 2018 Summary*.

4.6.2.2 Surface Waters

Surface water is any body of water above ground, including both natural features such as rivers, streams, lakes, and wetlands, and man-made or modified features, such as ponds, reservoirs, canals, and irrigation ditches. The following sections discuss the surface waters in the study area.

Drainage Basin and Watersheds

Surface waters in South Carolina can be assigned to a particular drainage or river basin. The project study area is located entirely in the Pee Dee River Basin (the largest of the eight major river basins in South Carolina). The US Geological Survey (USGS) categorizes drainage areas by specific numbers, or hydrologic unit codes (HUCs). Large river basins are identified with a four-digit HUC and sub-basins and watersheds within that larger basin are given eight-digit and ten-digit HUCs respectively, beginning with the same four digits.

The South Carolina portion of the Pee Dee River Basin flows from the Piedmont and Sandhills regions of the state to the Upper and Lower Coastal Plain and Coastal regions and encompasses 5 sub-basins (eight-digit hydrologic units), 45 watersheds (10-digit hydrologic units), and 5,022,747 acres. The project study area runs across two sub-basins, the Black River sub-basin (HUC 03040205), and the Lynches River sub-basin (HUC 03040202).[19]

The western portion of the project study area is located in the Black River sub-basin, which covers over 2,000 square miles from the Sandhills to the Upper and Lower Coastal Plains and into the Coastal Zone. The sub-basin originates near the City of Bishopville, encompassing nearly 1.3 million acres of land. The majority of the land is rural, with forested wetlands covering over 31% of the land. There are 18 watersheds, 2,143 stream miles, 2,332 acres of lake waters, and 763 acres of estuarine areas within the basin. The project study area is located in the Headwaters Black River watershed (HUC 0304020502), which makes up a portion of the Black River sub-basin.

The eastern portion of the project study area is located in the Lynches River sub-basin, which covers nearly 1,400 square miles from the Piedmont to the Sandhills, to the Upper and Lower Coastal Plains. The sub-basin originates in North Carolina and encompasses 887,668 acres of land. The majority of the land is rural, with forested land covering nearly 36% of the area. There are seven watersheds, 1,807 stream miles, and 1,310 acres of lake waters located in the basin.[20] The project study area is located in the Middle Lynches River watershed (HUC 0304020205), which makes up a portion of the Lynches River sub-basin.

[19] (2021). *Bishopville Truck Route Project Natural Resources Technical Memorandum.*
[20] SCDHEC. (2015). *Watershed Water Quality Assessment: Pee Dee River Basin. Technical Report No. 1029-15.* Bureau of Water. Retrieved February 2020 from https://www.scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Watershed/wwqa/Pee_Dee_WWQA_2015.pdf.

Streams and Rivers

There are three major perennial streams and three intermittent streams in the project study area that will be potentially impacted by the build alternatives (listed in **Table 4.6-2** and shown in **Figure 4.6-1a-1d**). The three perennial streams are Laws Branch, the Black River, and Robert E. Lee Branch. The intermittent streams are channelized drainage features related to agricultural practices that are incised and maintained for field drainage. Over time, streams in the area have been partially or fully channelized, which has eliminated or reduced the number of adjacent wetland areas. For more information, the *Bishopville Truck Route Project Natural Resources Technical Memorandum* (2021) can be found in **Appendix L**.

Table 4.6-2. Streams Potentially Impacted by the Project Alternatives

Stream Name	Stream Type	303(d) Listed	USGS Blue-line
Laws Branch	Perennial	No	Yes
Unnamed Tributary #1	Intermittent	No	Yes
Black River	Perennial	No	Yes
Unnamed Tributary #2	Intermittent	No	Yes
Unnamed Tributary #3	Intermittent	No	Yes
Robert E. Lee Branch	Perennial	Yes	Yes

Source: (2021). *Bishopville Truck Route Project Natural Resources Technical Memorandum*.

Pursuant to *Section 303(d) of the CWA* and 40 CFR 130.7, the approved Section 303(d) list for the state of South Carolina (2018) was reviewed to determine if there are water bodies in the project study area that do not meet state water quality standards. The Robert E. Lee Branch (Cousar Branch) of the Lynches River is listed on SCDHEC's Section 303(d) impaired waters list because the stream exceeds allowable limits for *Escherichia coli (E. coli)*, based on sampling at the water quality monitoring station (WQMS) PD-112.[21] According to the *SCDHEC Watershed Water Quality Assessment: Pee Dee River Basin* (2015), aquatic life uses are fully supported (**Appendix M**).

However, there are significant decreasing trends in dissolved oxygen concentration and increasing turbidity trends. There is also a significant decreasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions.[22] The total maximum daily load (TMDL) for this stream is not established.

The SCDHEC Bureau of Water is responsible for the National Pollutant Discharge Elimination System (NPDES) Permit Program for South Carolina. The City of Bishopville Wastewater Treatment Plant, located on McGuirt Road, has an existing NPDES General Permit (GP) for Domestic Wastewater Treatment Plant Dischargers that allows for discharge into the Robert E. Lee Branch.

[21] SCDHEC. (2018). *The State of South Carolina's 2018 Integrated Report (IR) Part I: List of Impaired Waters.* Retrieved February 2020 from https://www.scdhec.gov/sites/default/files/media/document/PN_IR_Part_I_2018.pdf.
[22] SCDHEC. *Watershed Water Quality Assessment: Pee Dee River Basin. Technical Report No. 1029-15.* Bureau of Water. Retrieved February 2020 from https://www.scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Watershed/wwqa/Pee_Dee_WWQA_2015.pdf.

Wetlands and Ponds

The USFWS National Wetlands Inventory (NWI) database was assessed to determine the extent of wetlands and other WOTUS located in the project study area. In general, the wetlands in the project study area include forested and emergent wetlands historically modified by human disturbance and land-use practices including draining, clearing, and channelization of natural drainage. All wetlands in the project study area are Category 4 wetlands because they have been affected by human disturbances. A small pond is in the study area in the pine/hardwood forest in the northeast section.

4.6.2.3 Wild and Scenic Rivers

Nationwide Rivers Inventory

The Nationwide Rivers Inventory (NRI) is a listing of more than 3,400 free-flowing river segments in the US that are believed to possess one or more "outstandingly remarkable" natural or cultural values judged to be at least regionally significant. Under section 5(d)(1) of the *Wild and Scenic Rivers Act of 1968* (Public Law 90-452; 16 USC 1271), all federal agencies must seek to avoid or mitigate actions that would adversely affect NRI segments. No listed NRI segments are in the study area.

State Designated Scenic Rivers

The *South Carolina Scenic Rivers Act of 1989* (SC Code of Regulations 49-29) has the purpose of protecting "unique or outstanding scenic, recreational, geologic, botanical, fish, wildlife, historic or cultural values" of selected rivers or river segments in the state. There are no designated State Scenic Rivers segments in the project study area.

4.6.3 How would water resources be impacted by the project?

This section discusses the potential effects of the proposed project on water resources in the project study area. The direct impacts are discussed for each alternative. The potential wetland and stream impacts are presented in **Table 4.6-3** and shown in **Figure 4.6-2a-2d**.

Potential impacts (including, but not limited to filling, clearing, piping, and armoring) to water resources are categorized into freshwater emergent wetland, freshwater forested/shrub wetland, pond, and stream. All impacts are based on the proposed roadway footprint plus a 25-foot buffer on each side. Wetlands and WOTUS were given special consideration during the development and evaluation of the project. The project would utilize steeper fill slopes in and near wetlands where possible to avoid long-reaching slopes into wetlands.

Table 4.6-3. Potential Wetland and Stream Impacts by Alternative

Resource	Alternative												
	No Build	1	2	3	4	5	6 (PA)	7	8	9	10	11	12
Freshwater Emergent Wetland	0.0	<0.1	1.1	<0.1	0.0	1.1	0.0	1.1	1.1	<0.1	<0.1	<0.1	0.0
Freshwater Forested/ Shrub Wetland	0.0	3.1	3.1	1.9	1.9	2.9	4.0	2.2	3.1	1.1	1.9	1.1	1.9
Total Wetlands (acres)	**0.0**	**3.1**	**4.1**	**1.9**	**1.9**	**4.0**	**4.0**	**3.3**	**4.1**	**1.1**	**1.9**	**1.1**	**1.9**
Pond (acres)	0.0	0.0	0.1	0..3	0.3	0.1	0.3	0.0	0.3	0.0	0.1	0.0	0.1
Stream (linear feet)	0	729	636	535	535	730	732	635	638	532	533	532	533
Stream Crossing (Yes or No)													
Robert E. Lee Branch	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Black River	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Laws Branch	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No	No	No
Unnamed Tributary #1	No	Yes	No	No	No	Yes	Yes	No	No	No	No	No	No
Unnamed Tributary #2	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Unnamed Tributary #3	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: (2021). *Bishopville Truck Route Project Natural Resources Technical Memorandum*.
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

4.6.3.1 Wetlands and Streams

No-Build Alternative

The No-Build Alternative would not affect existing wetlands or other WOTUS.

Build Alternatives

All 12 build alternatives would impact wetlands and other WOTUS. As seen in **Table 4.6-3**, Alternatives 2 and 8 are estimated to have the greatest impact on wetlands with 4.2 acres each. Alternatives 9 and 11 are estimated to have the least impact on wetlands with 1.1 acres each. Alternative 6 (Preferred Alternative) is estimated to impact 4 acres of wetlands and cross all six streams (Robert E. Lee Branch, Black River, Laws Branch, Unnamed Tributary #1, Unnamed Tributary #2, and Unnamed Tributary #3). This results in a total of 732 linear feet of potential stream impacts, which is the greatest out of all build alternatives. Alternatives 9 and 11 are estimated to have the least impact on streams with 532 linear feet of potential stream impacts each.

In addition to the total quantity of wetland and other WOTUS impacts, the quality or conditions of the resources were also considered. In evaluating the importance of the wetlands, the analysis should consider such factors as the primary functions of the wetlands (e.g., flood control, wildlife habitat, groundwater recharge, etc.), the relative importance of these functions to the total wetland resource of the area, and other factors such as uniqueness that may contribute to the wetland's importance. Higher quality wetlands and streams are generally valued for their function and aesthetics.

All wetlands in the project study area are classified as Category 4 wetlands because they have been affected by human disturbances and land use practices including draining, clearing, and channelization of natural drainage. Impacted wetlands would likely be filled or have bridges and culverts constructed in them. This would potentially result in the loss of all existing function in the impacted area. Unimpacted wetland areas with the project study area would retain existing function, including flood storage, wildlife habitat, and water pollution abatement. Hydrologic connectivity for remaining wetland areas would be maintained using pipe and culverts as needed and appropriate.

Most of the stream impacts for the build alternatives would occur on low to medium quality rural streams that have been disturbed, partially piped, or channelized in the past. Impacts would likely include the construction of new bridges and culverts, placement of rip-rap in the stream channel, and loss of riparian buffers. These impacts would likely result in a partial or completed loss of habitat function in the impacted stream section. The exact type and extent of impacts on streams would be determined during the final design phase of the project and addressed during the Section 401/402 permitting process.

4.6.3.2 Water Quality

All 12 build alternatives would cross the Robert E. Lee Branch between one-quarter and one-half mile upstream of the WQMS. Water quality at all potentially affected streams could be impacted as a result of pollutant buildup in new areas of the project area from the increase in traffic volume. Because of rain, inorganic materials, volatile organic compounds (from petroleum products), dust from vehicle brakes and exhaust, and heavy metals can build up on roadways and runoff into streams and wetlands. Grassed shoulders are proposed for the project to serve as a vegetated strip to filter pollutants from runoff and reduce flow velocities. Grassed ditches would also provide an opportunity for pollutants to settle out before reaching streams or other bodies of water.

4.6.4 How would water resource impacts be mitigated?

The general tiered approach to mitigating impacts on water resources is to (1) avoid impacts wherever possible in the alternative-development and screening process (2) minimize impacts during the design and construction stages of the project and (3) compensate unavoidable impacts on water resources through compensatory mitigation. **Section 4.12** includes more information on water resources impact mitigation for the construction phase of the project.

4.6.4.1 Avoidance and Minimization Measures

The avoidance of impacts on water resources was considered during the alternative-development and screening process. Complete avoidance of water resources is not possible due to the location of potential alternative alignments and configuration of natural resources in the project study area.

Minimization of impacts would include the identification and consideration of measures to reduce adverse impacts on water resources during the design and construction stages of the project. Efforts to reduce the proposed project's footprint in design to the greatest extent practical would be the primary technique in minimizing impacts. This may be achieved by reducing ROW widths, using fill slopes, or constructing bridges or culverts.

The use of best management practices (BMPs) during the construction phase of the project would help to further reduce impacts. Documentation of these minimization efforts would be required for the Section 401/404 permitting process and coordination between SCDOT and USACE.

Impacts on jurisdictional waters will be permitted under a Section 404 permit from USACE. Based on the preliminary design, it is anticipated that the proposed project would be permitted under a USACE Individual Permit. See **Section 4.15** for additional information on anticipated permits for the project.

4.6.4.2 Wetland Protection and Compensatory Mitigation

Executive Order (EO) 11990: Protection of Wetlands, requires federally supported projects to preserve wetlands and to avoid and minimize wetland impacts to the maximum extent practicable. Mitigation has been defined in the *National Environmental Policy Act (NEPA)* regulations to include efforts which: a) avoid b) minimize c) rectify d) reduce or eliminate or e) compensate for adverse impacts on the environment (40 CFR 1508.20 [a-e]). *Section 404(b) (1) Guidelines of the CWA* and *EO 11990* stress avoidance and minimization as primary considerations for the protection of wetlands. SCDOT would comply with *EO 11990* regarding the protection of wetlands. The permanent stream and wetland impacts required for construction would be quantified and applied to the determination of required compensatory mitigation per the latest USACE Mitigation Standard Operating Procedure (SOP).

4.6.4.3 Water Quality

To mitigate water quality impacts, an erosion control plan would be developed and implemented before construction and would incorporate measures to control non-point source impacts of construction pollution. Potential borrow areas to be used for project fill will be field reviewed and assessed for the presence of any jurisdictional features, and BMPs will be applied before land disturbance to avoid and/or minimize erosion and control sediment runoff.

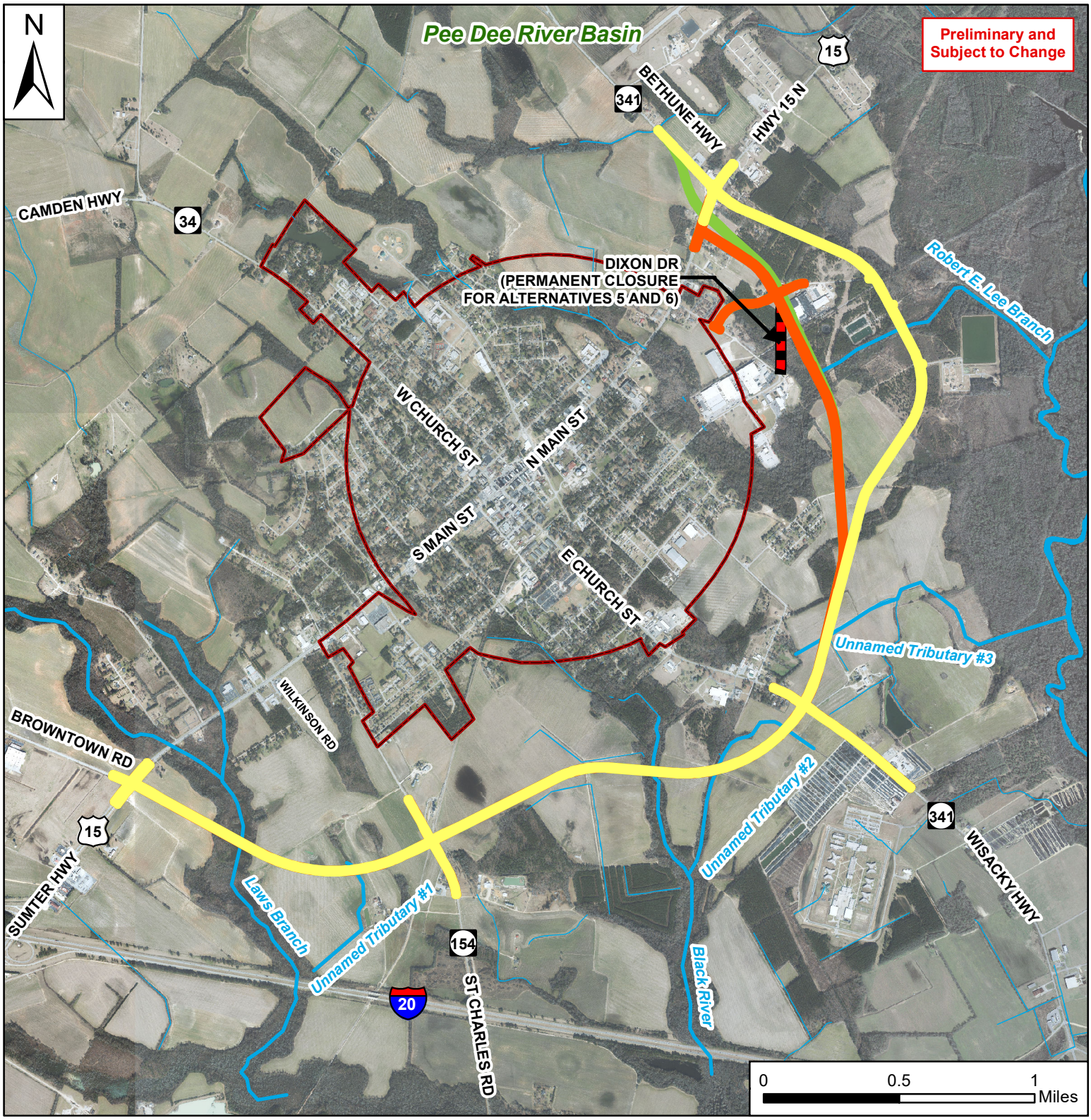
The contractor would avoid and minimize impacts resulting from stormwater runoff through the implementation of construction BMPs reflecting policies contained in 23 CFR 650B and *SC Code of Regulations 72-400*. The SCDOT has also issued an *Engineering Directive Memorandum* (Number 23), dated April 10, 2015, regarding procedures to be followed to ensure compliance with *SC Code of Regulations 72-400, Standards for Stormwater Management and Sediment Reduction*. Exposed areas may be stabilized by following SCDOT *Supplemental Technical Specification for Seeding* (SCDOT Designation SC-M-810-4 (07-17)). SCDOT *Standard Specifications for Highway Construction* (2007) would be followed during design and construction to minimize the amount of runoff pollution.

A Section 401 State Water Quality Certification would be required and will be completed during the Joint 404/401 permitting process. A *Stormwater Pollution Prevention Plan (SWPPP)* will be developed and a Section 402 NPDES permit will be obtained before initiating land-disturbing activities in compliance with the South Carolina *Stormwater Management and Sediment Reduction Act* (1991). Due to the existing water quality impairment of the Robert E. Lee Branch, SCDHEC may require additional water quality protection and stormwater treatment measures during and after construction. Specific mitigation requirements for water quality impacts would be determined during the Section 401/402 permitting process. The project does not propose to release sources of fecal coliform into adjacent streams and the contractor would identify and avoid all point sources of fecal coliform during construction.

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Rivers and Streams
Municipal Boundary
Alternative 1
Alternative 5
Alternative 6

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Rivers and Streams – Alternatives 1, 5, and 6

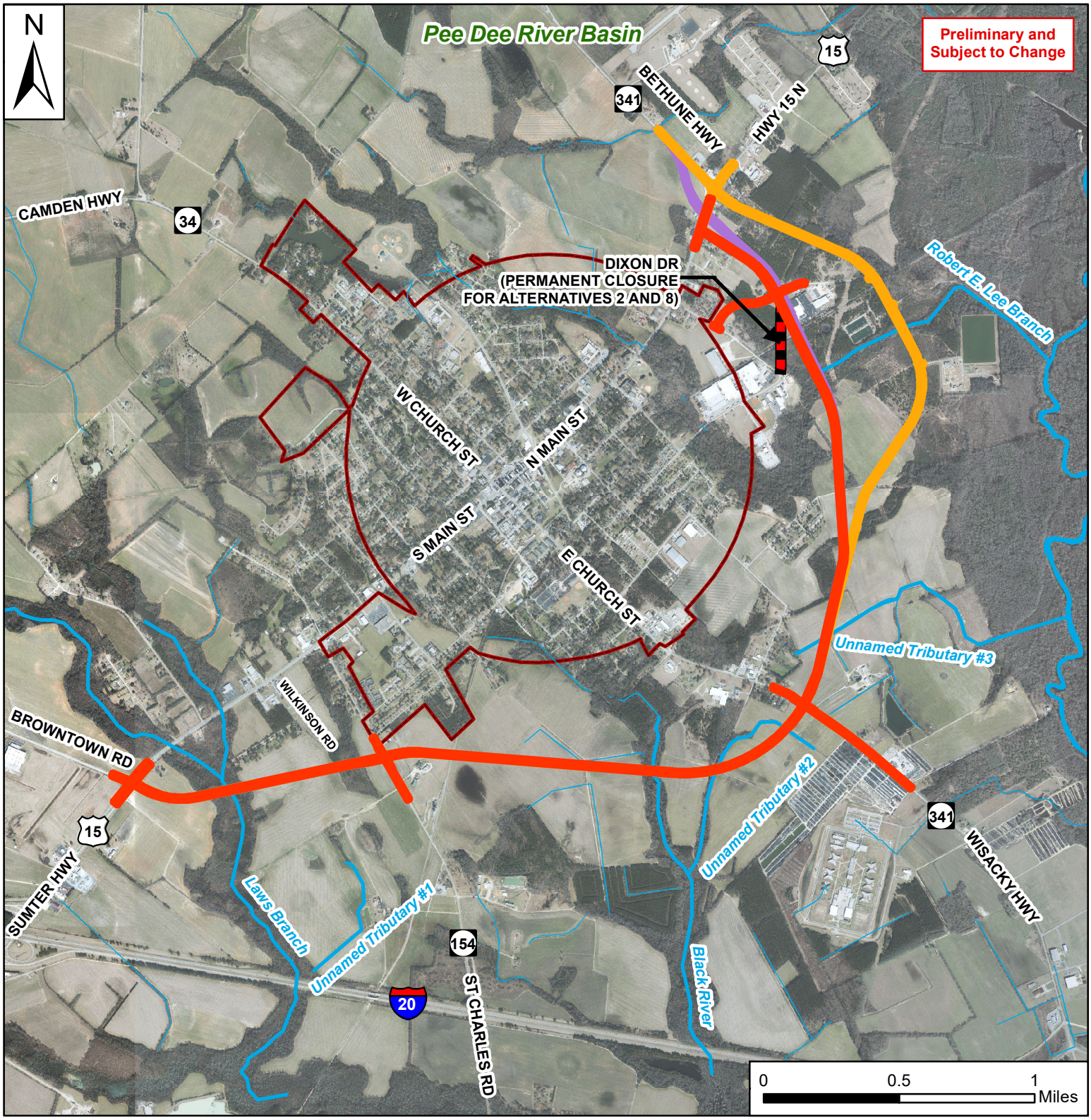
Figure

4.6-1a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Rivers and Streams
Municipal Boundary
Alternative 2
Alternative 7
Alternative 8

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Rivers and Streams – Alternatives 2, 7, and 8

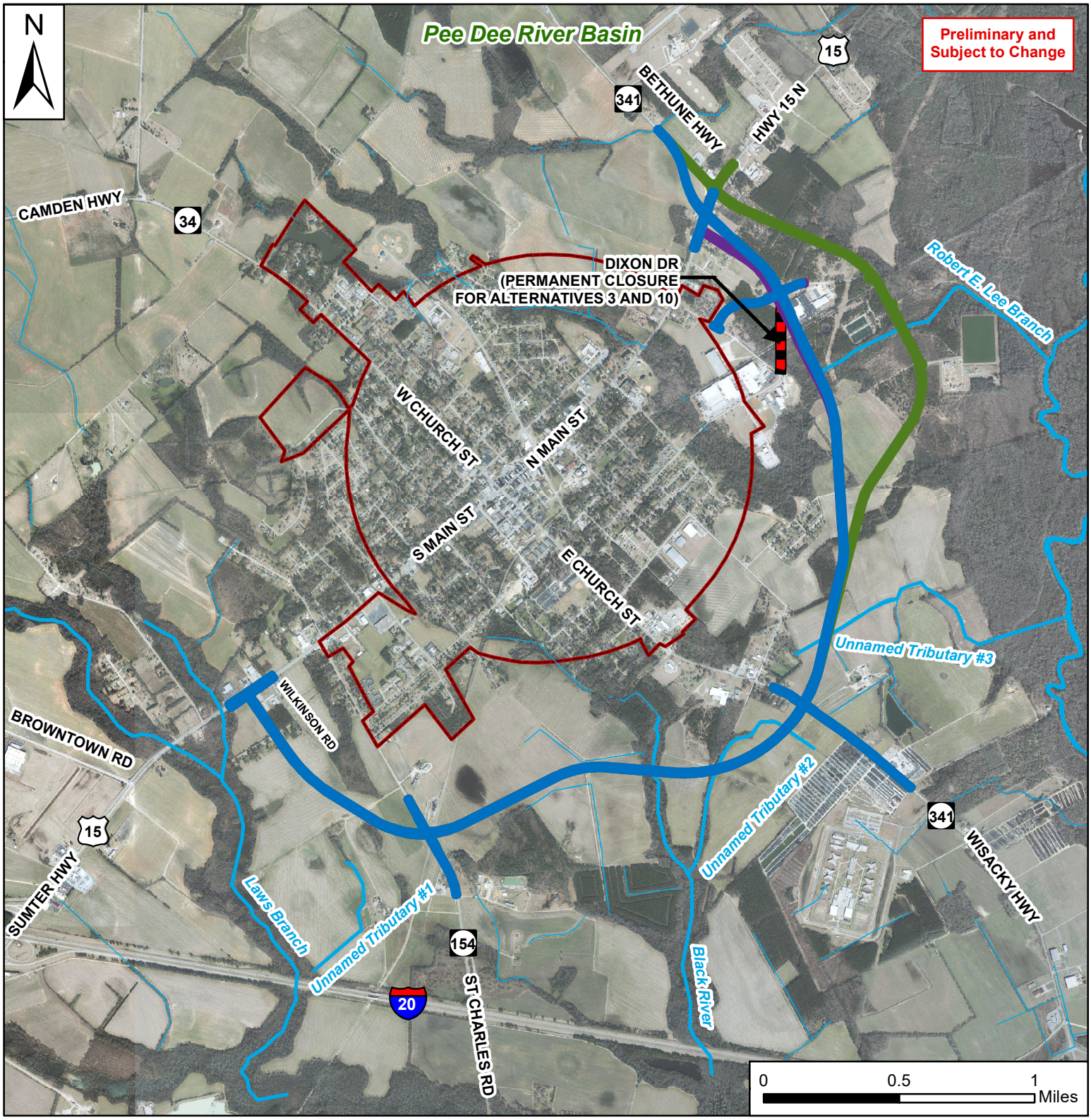
Figure

4.6-1b

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Rivers and Streams
Municipal Boundary
Alternative 3
Alternative 9
Alternative 10

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Rivers and Streams – Alternatives 3, 9, and 10

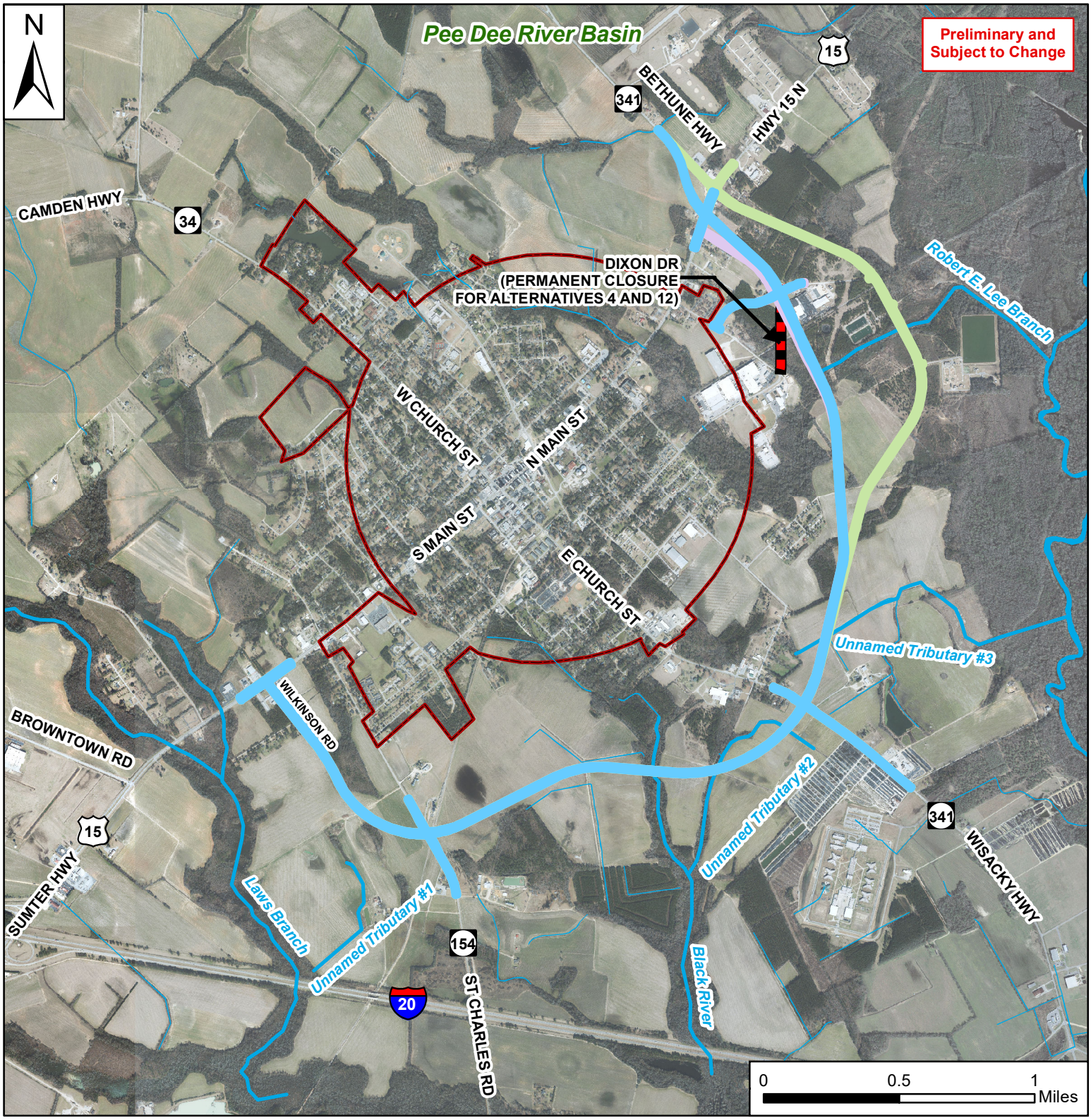
Figure

4.6-1c

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Rivers and Streams
Municipal Boundary
Alternative 4
Alternative 11
Alternative 12

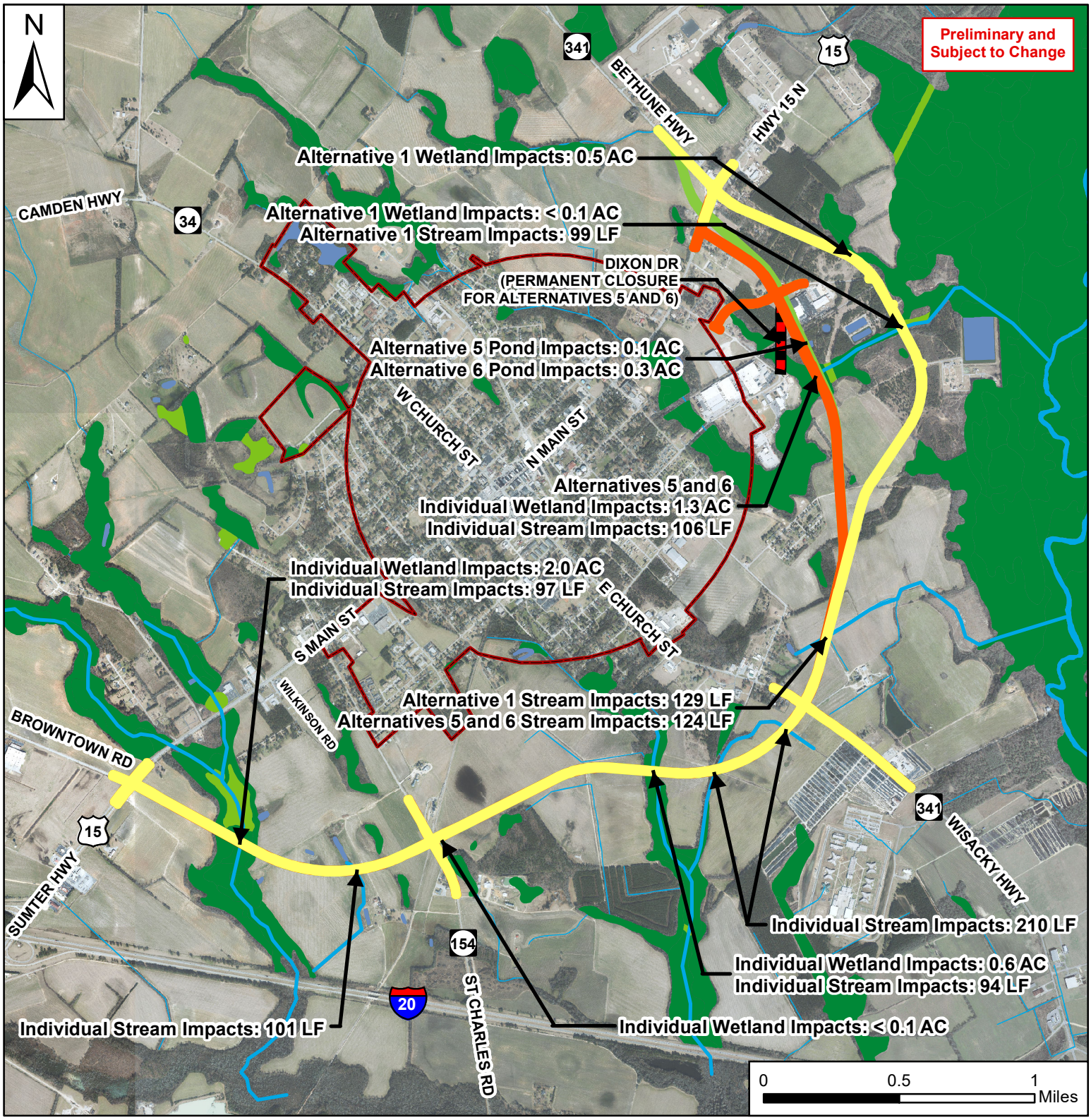
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Rivers and Streams – Alternatives 4, 11, and 12

Figure

4.6-1d



Permanent Road Closure
Rivers and Streams
Alternative 1
Alternative 5
Alternative 6
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

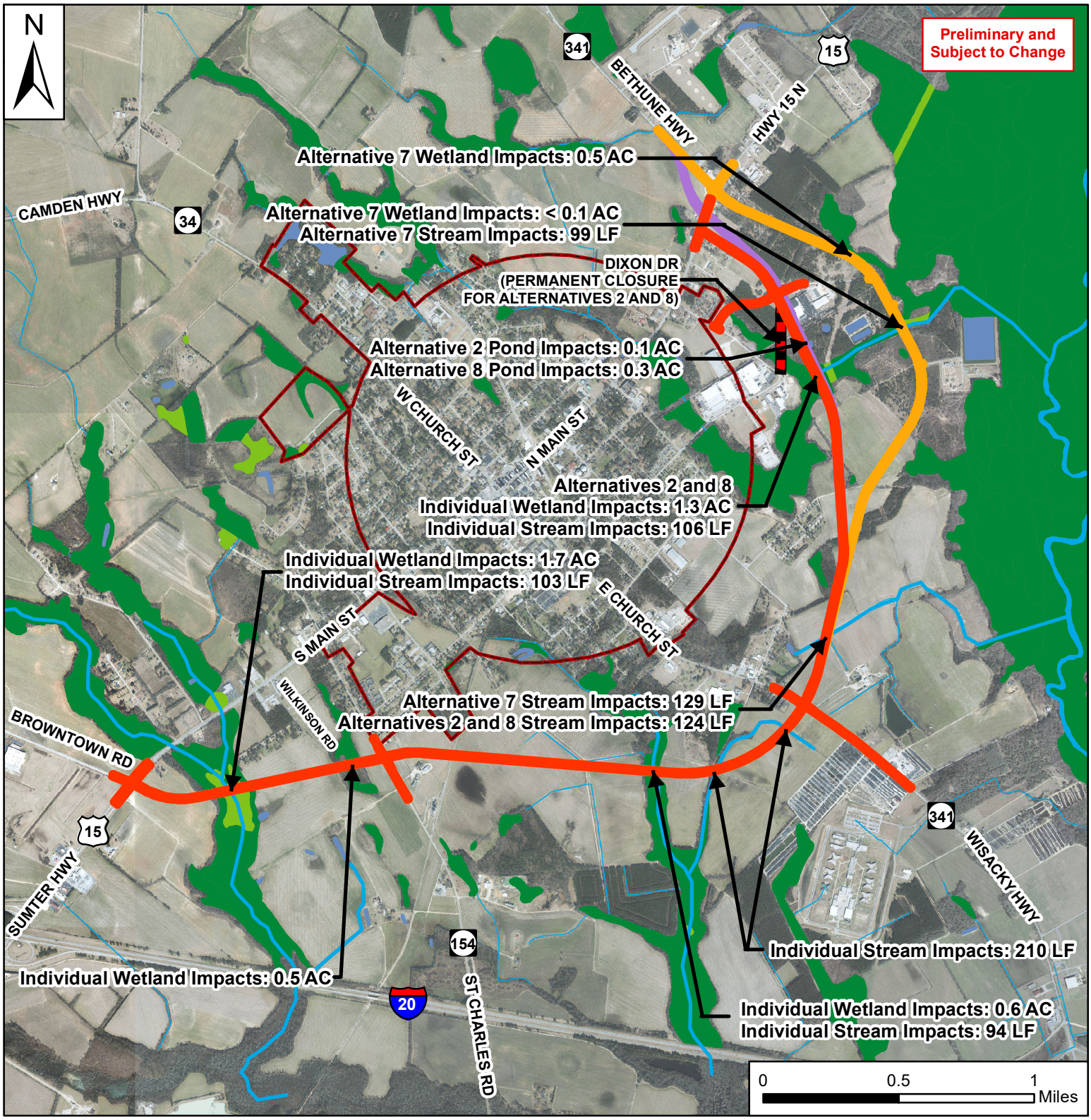
Potential Wetland and Stream Impacts – Alternatives 1, 5, and 6

Figure
4.6-2a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Rivers and Streams
Alternative 2
Alternative 7
Alternative 8
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

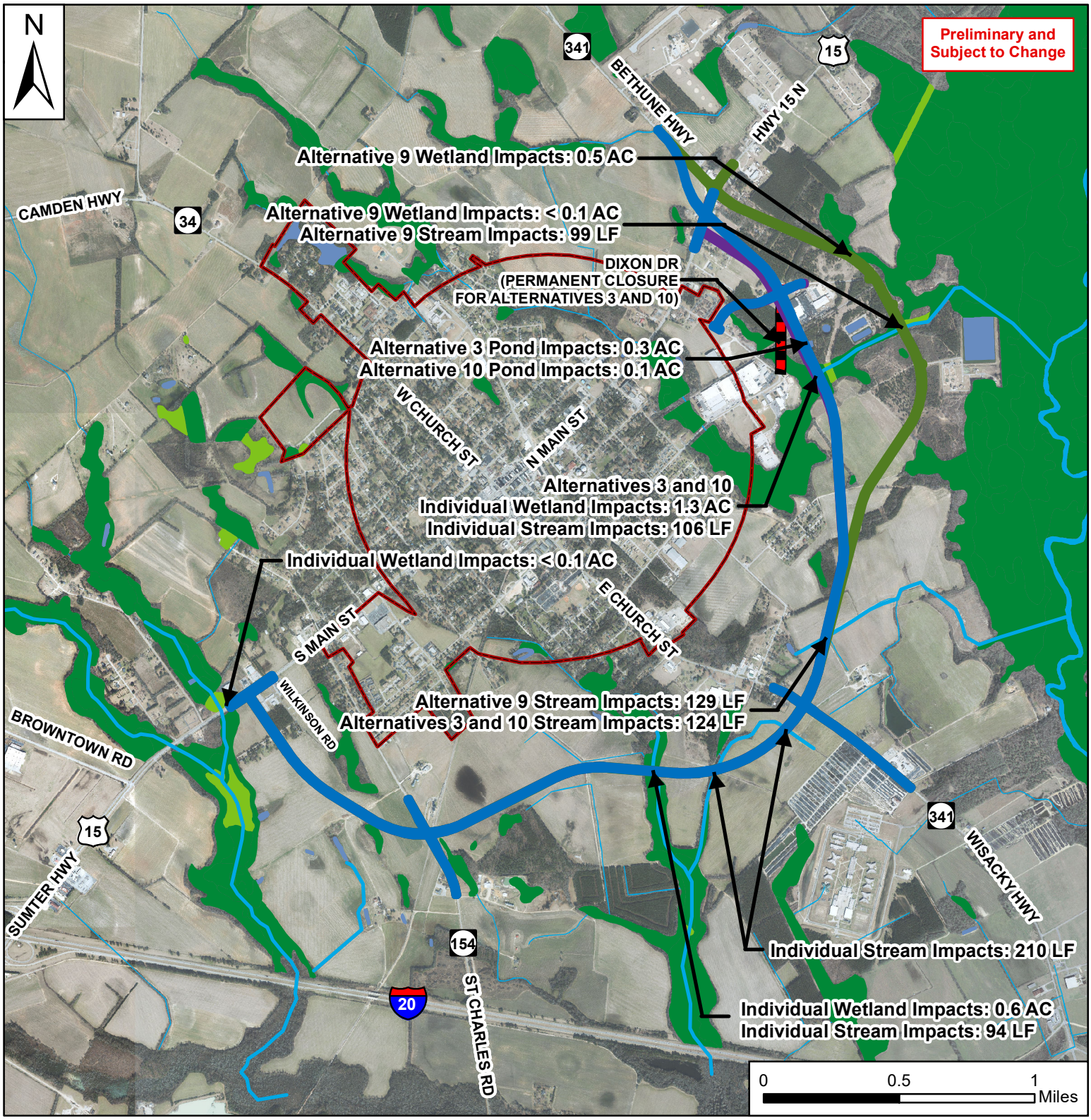
Potential Wetland and Stream Impacts – Alternatives 2, 7, and 8

Figure
4.6-2b

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



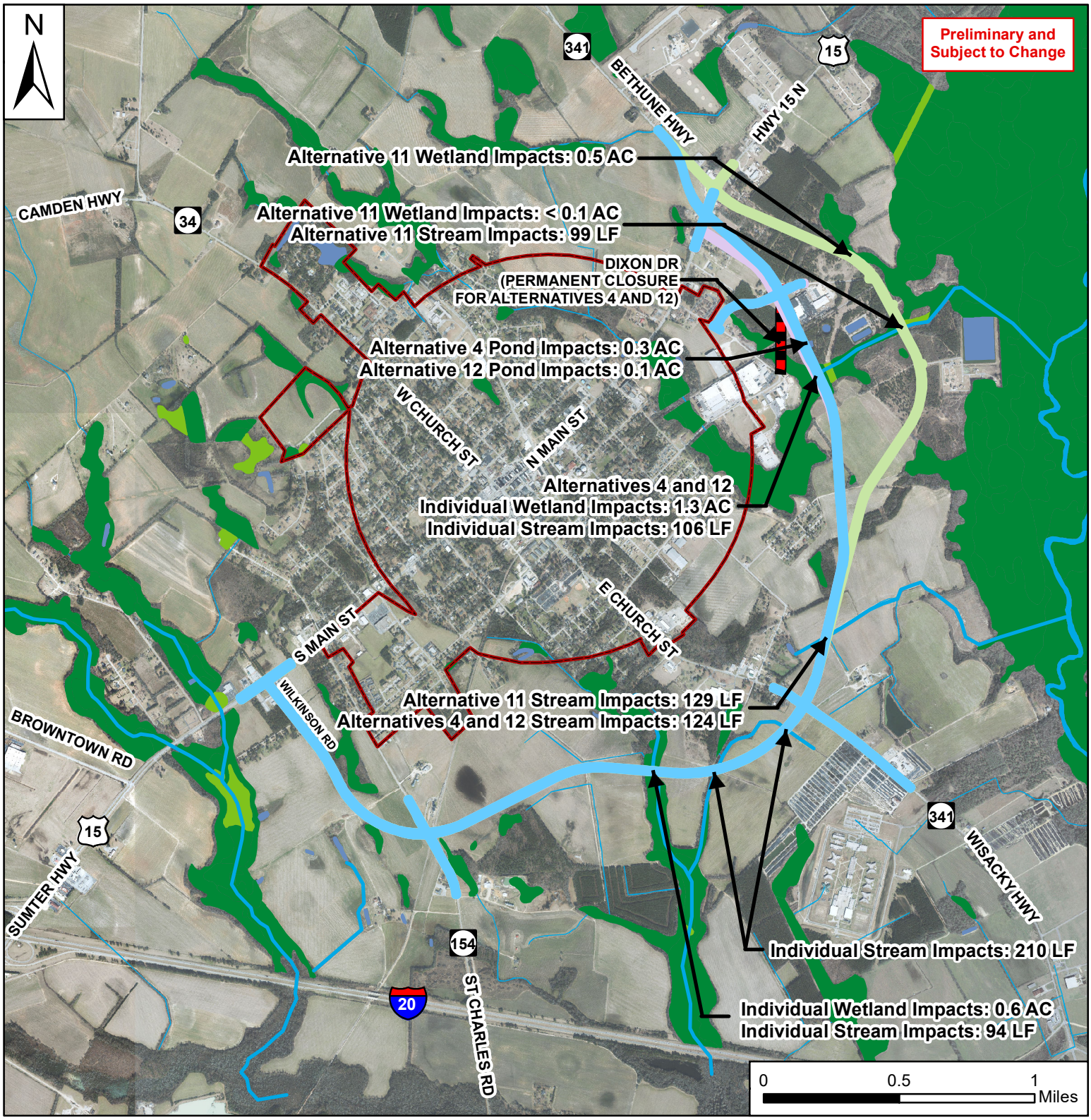
Permanent Road Closure
Rivers and Streams
Alternative 3
Alternative 9
Alternative 10
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential Wetland and Stream Impacts – Alternatives 3, 9, and 10

Figure
4.6-2c



Permanent Road Closure

Rivers and Streams

Alternative 4

Alternative 11

Alternative 12

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential Wetland and Stream Impacts – Alternatives 4, 11, and 12

Figure

4.6-2d

4.7 Floodplains and Floodways

This section includes an overview of floodplains and floodways and summarizes the assessment of potential project impacts on these resources.

4.7.1 What are floodplains and floodways?

Floodplains are areas of land adjacent to streams or rivers that experience flooding during heavy storm events. Floodplains provide natural floodwater storage and erosion protection, recharge groundwater, and support a wide range of plants, animals, and biological habitats. Due to the ecological and hydrological importance of floodplains, development in and around their boundaries is regulated by various federal, state, local agencies. For regulatory purposes, a floodplain is defined by the area inundated during a 1% probability flood event, also known as the 100-year flood zone. Floodplains are not the same as floodways; floodways are the channels of a river or stream and the parts of the floodplain adjacent to the channel that must remain open to allow floodwaters to pass.

4.7.2 How are floodplains and floodways regulated?

The Federal Emergency Management Agency (FEMA) is responsible for regulating floodplains and floodways at the federal level. FEMA publishes maps, the Flood Insurance Rate Map (FIRM), that designate flood hazard boundaries and that show a view of a community (or communities) with the flood hazard boundaries categorized by different zones. The following defines all flood zones found in the project study area:

Zone A: areas inundated by the 1% annual chance flood (100-year storm) and have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations (BFE) are not available for Zone A floodplains because their boundaries are determined by approximate methods.

Zone AE: areas inundated by the 1% annual chance flood and BFE values are available because their boundaries are determined by detailed methods.

Zone AE Floodway: portions of the Zone AE floodplain needed the convey the base flood (100-year storm) without increasing the water surface elevation more than a designated height.

4.7.3 What floodplains are located in the project study area?

The project study area falls in the FIRM numbers 45061C0135C, 45061C0151C, and 45061C0153C, all effective date 11/19/2008. There is a Letter of Map Revision (LOMR) associated with panel 45061C0153C with an effective date of 1/23/2014 and case number of 13-04-1422P.

Table 4.7-1 lists the floodplains in the project study area by their respective flooding sources. The location and limits of potential floodplain crossings are in **Figure 4.7-1a-1d**.

Table 4.7-1. FEMA Regulated Floodplains in the Project Study Area

Floodplain	FIRM Number	FEMA Flood Zone
Laws Branch	45061C0135C	Zone A
Black River	45061C0153C	Zone A
Robert E. Lee Branch	45061C0151C	Zone AE Floodway
Airport Run	45061C0151C	Zone A

Source: FEMA. (2020). *FEMA Flood Map Service Center.* Retrieved February 2020 from https://msc.fema.gov

4.7.4 How would the alternatives impact floodplains and floodways?

FEMA data and GIS data indicated the build alternatives cross or encroach upon four different FEMA-regulated floodplains surrounding Bishopville. **Table 4.7-2** lists the acreage of potential floodplain impact for the project alternatives categorized by flood zone. Potential floodplain impacts for each alternative are labeled for each crossing or encroachment in **Figure 4.7-1a-1d**. No incompatible floodplain development would result from the proposed project.

Table 4.7-2. Potential 100-Year FEMA Floodplain Impacts

Alternative	Zone A Floodplain (acres)	Zone AE Floodplain (acres)	Zone AE Floodway (acres)	Total Floodplain Impacts (acres)
No-Build	0.0	0.0	0.0	0.0
Alternative 1	1.6	0.1	0.1	1.8
Alternative 2	1.2	0.3	0.1	1.6
Alternative 3	0.4	0.3	0.1	0.8
Alternative 4	0.3	0.3	0.1	0.7
Alternative 5	1.6	0.3	0.1	2.0
Alternative 6 (PA)	1.6	0.3	0.1	2.0
Alternative 7	1.2	0.1	0.1	1.4
Alternative 8	1.2	0.3	0.1	1.6
Alternative 9	0.4	0.1	0.1	0.6
Alternative 10	0.3	0.3	0.1	0.7
Alternative 11	0.3	0.1	0.1	0.5
Alternative 12	0.3	0.3	0.1	0.7

Source: FEMA. (2020). *FEMA Flood Map Service Center.* Retrieved February 2020 from https://msc.fema.gov.
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

4.7.4.1 No-Build Alternative

The No-Build Alternative would not affect existing floodplains and floodways.

4.7.4.2 Build Alternatives

All 12 build alternatives would impact existing floodplains and floodways. As seen in **Table 4.7-2**, Alternative 5 and Alternative 6 (Preferred Alternative) are estimated to have the greatest impact on floodplains, with 2 acres each. Alternative 11 is estimated to have the least impact on floodplains.

4.7.5 How will floodplain impacts be mitigated?

All build alternatives have the potential to impact floodplains and the proposed project would be designed to minimize impacts on floodplains. The primary mitigation method for floodplains would be to minimize the number of impacted areas in the design and construction of bridges, culverts, and roadway embankments, per the requirements of *Executive Order (EO) 11988* (Floodplains Management). This would be achieved by maintaining perpendicular crossings, observing stream bank setback requirements, and reducing bridge spans to the greatest extent practical. All structures would be designed to FEMA standards and to be consistent with local floodplain development plans.

A complete hydrologic and hydraulic study will be conducted per SCDOT and FEMA regulations to better assess the effects of the project on the base floodplain during the final design process. This study would also determine the correct sizes of bridges and culverts for proposed hydraulic crossings. More information can be found in the *SCDOT Floodplains Checklist and Bridge Risk Assessment Forms* in **Appendix N**.

However, the project is not expected to be a significant or longitudinal encroachment, as defined under 23 CFR 650A, and it is not expected to have an appreciable environmental impact on the base floodplain. The proposed project would be designed to be consistent with local floodplain development plans. In addition, coordination efforts with regulatory and resource agencies would minimize floodplain impacts during the final design process.

4.7.5.1 FEMA Permitting

All build alternatives would cross the FEMA Zone AE at Robert E. Lee Branch either as a new crossing or existing bridge replacement on McGuirt Road. Any new crossing or bridge replacement over a FEMA-regulated floodplain will require coordination with the designated FEMA permit authority to assess the impacts of the proposed crossing. Documentation of the design and hydraulic modeling analysis must be submitted for review per requirements outlined in the SCDOT *Requirements for Hydraulic Design Studies* (2009).

Floodplains

Due to the ecological and hydrological importance of floodplains, development in and around their boundaries is regulated by various federal, state, and local agencies.

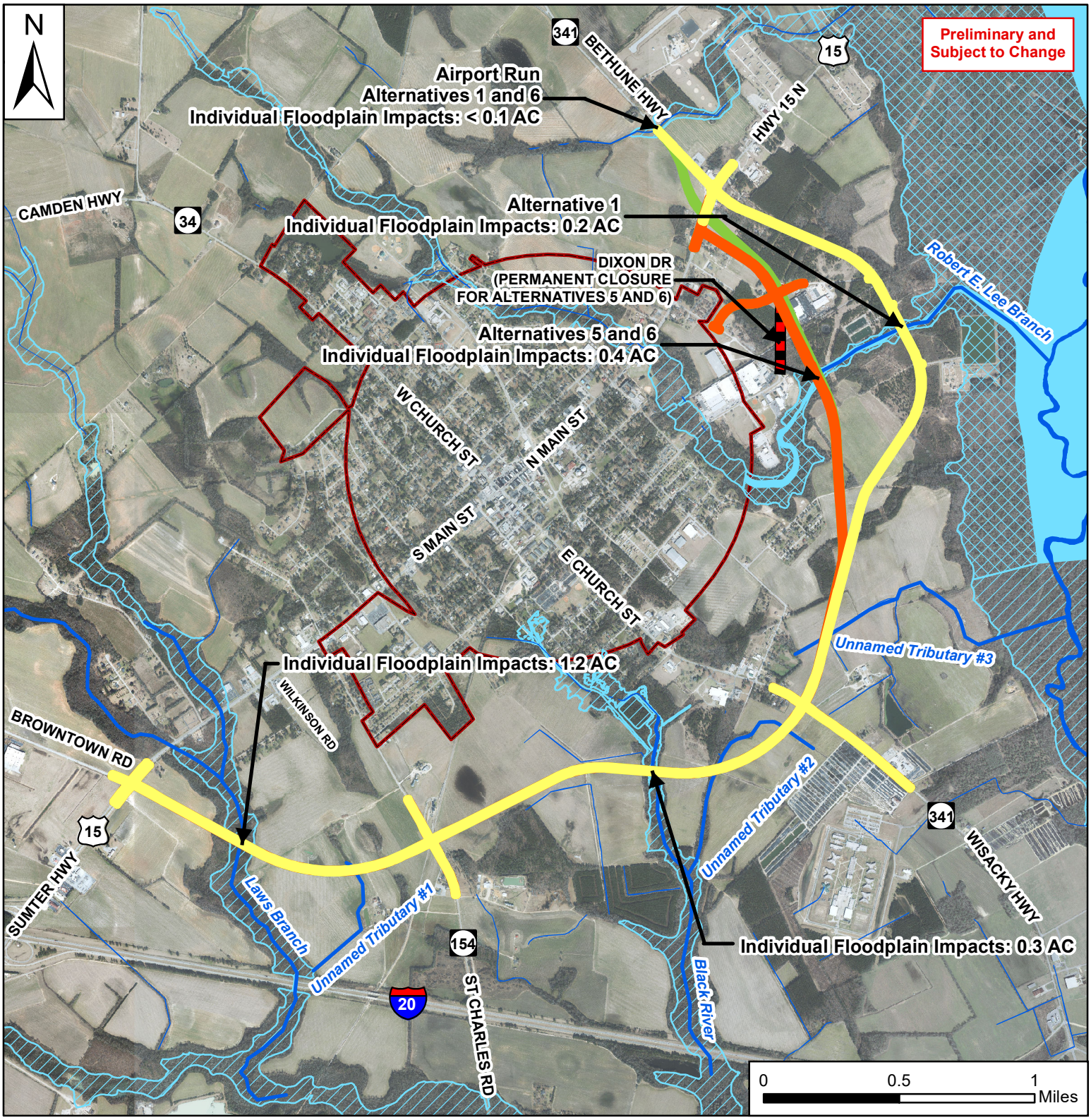
FEMA permit requirements for the crossing of a Zone AE floodplain are determined by the calculated rise in the BFE due to construction of the structure. A "No-Rise" certification may be issued if there is no more than a 0.1-foot change in the BFE. If the rise is greater than 0.1-foot, a Conditional Letter of Map Revision (CLOMR) would be required from FEMA to ensure that any proposed structure is consistent with the National Flood Insurance Program (NFIP). The project would be designed to meet "No-Rise" requirements in regulatory floodplains containing Zone AE floodways. In the event a "No-Rise" condition cannot be achieved, coordination with FEMA would require preparation of a CLOMR/LOMR package.

All other proposed hydraulic structures in Zone A floodplains would be designed to limit BFE increases to less than one foot and provide clearances above the BFE per SCDOT requirements. Where no regulatory floodplain is defined, culverts and bridges would be designed to accommodate a 50-year or greater magnitude flood event. More detailed information on the potential bridge replacement on McGuirt Road is in the *SCDOT Floodplains Checklist* and *Bridge Risk Assessment Forms,* which can be found in **Appendix N**.

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Rivers and Streams
Permanent Road Closure
Alternative 1
Alternative 5
Alternative 6
Zone A Floodplain
Zone AE Floodplain
Zone AE Floodway
Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential 100-Year FEMA Floodplain Impacts – Alternatives 1, 5, and 6

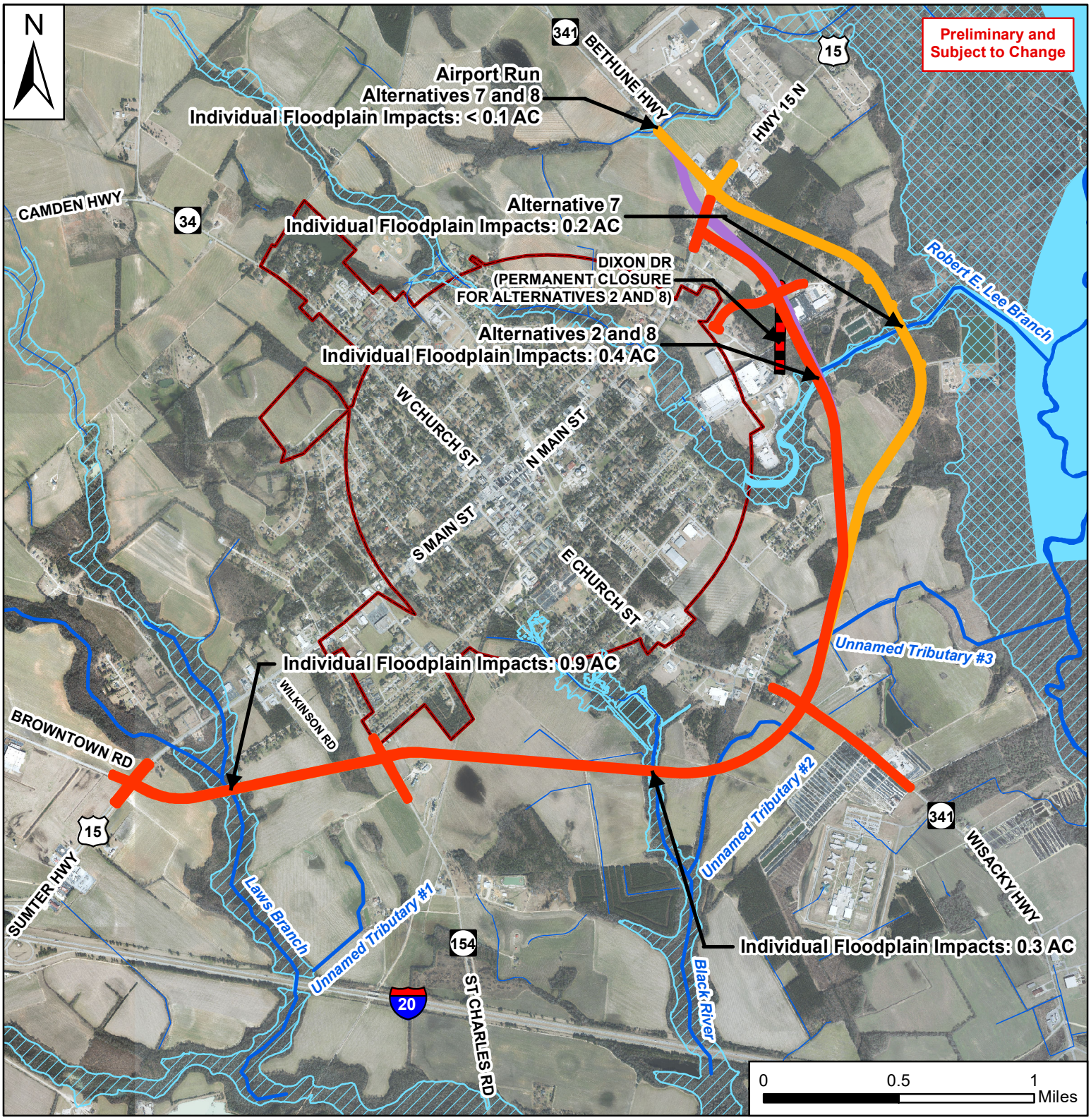
Figure

4.7-1a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Rivers and Streams
- Permanent Road Closure
- Alternative 2
- Alternative 7
- Alternative 8
- Zone A Floodplain
- Zone AE Floodplain
- Zone AE Floodway
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential 100-Year FEMA Floodplain Impacts – Alternatives 2, 7, and 8

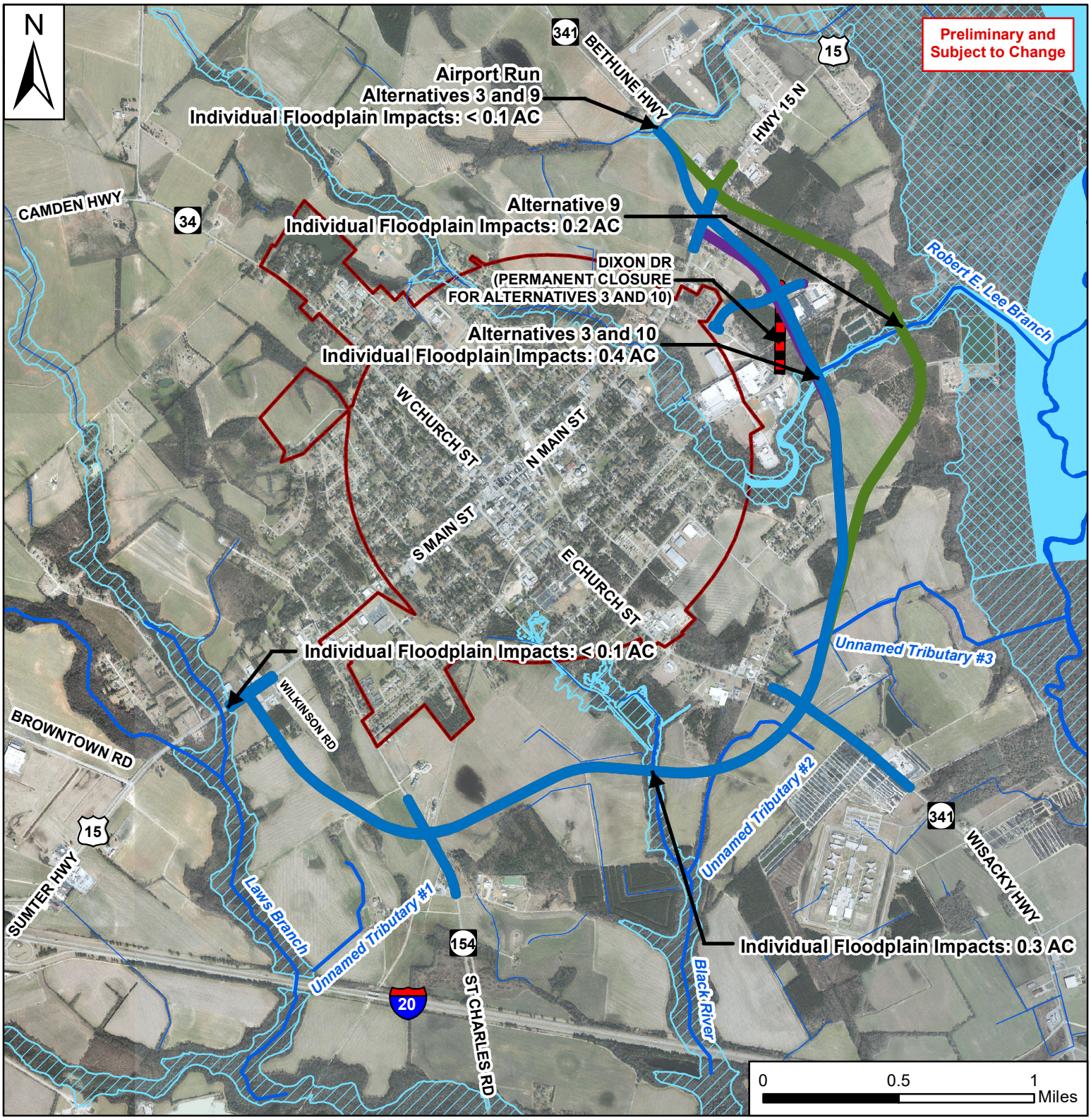
Figure

4.7-1b

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Rivers and Streams
- Permanent Road Closure
- Alternative 3
- Alternative 9
- Alternative 10
- Zone A Floodplain
- Zone AE Floodplain
- Zone AE Floodway
- Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential 100-Year FEMA Floodplain Impacts – Alternatives 3, 9, and 10

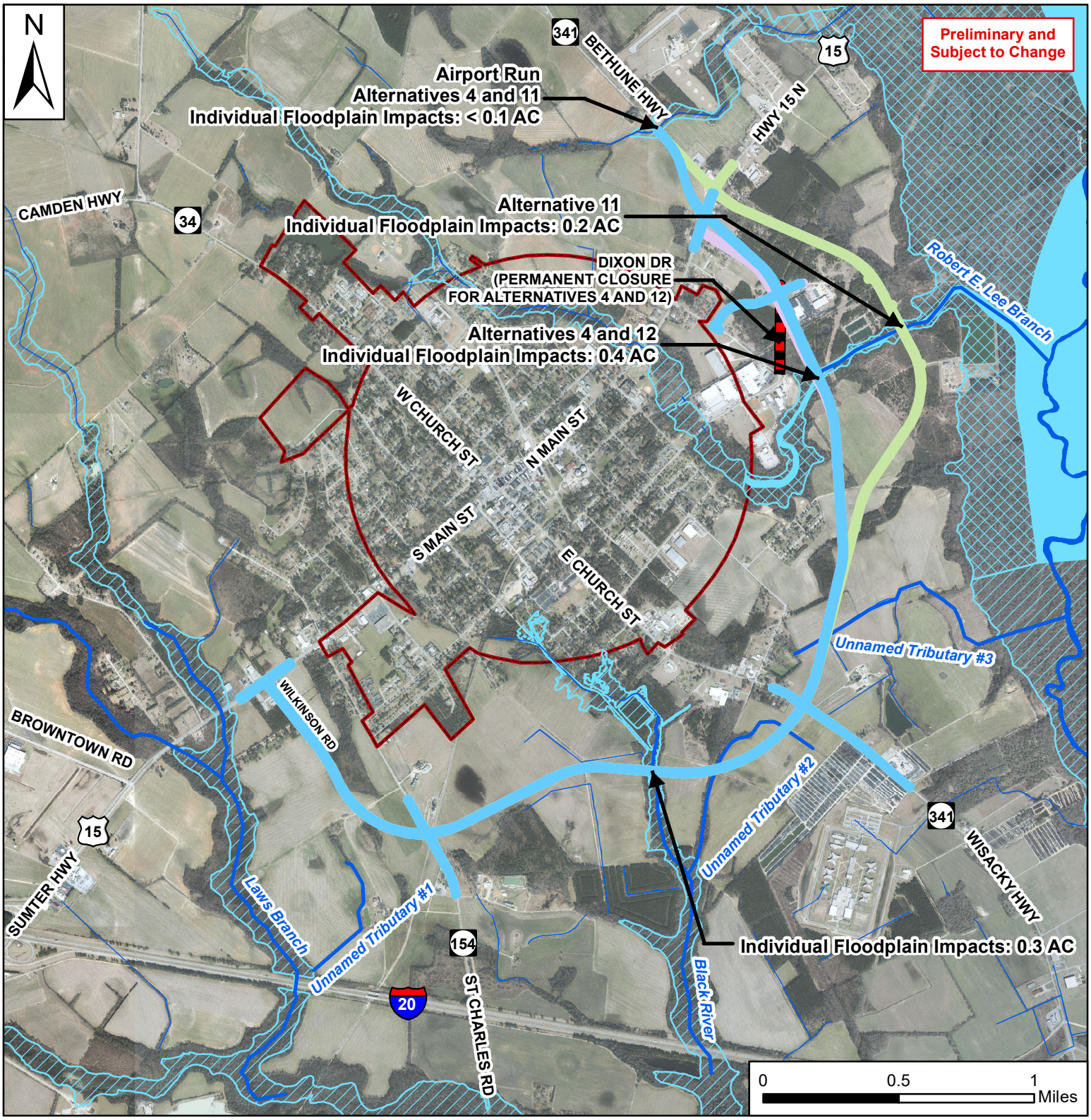
Figure

4.7-1c

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Rivers and Streams	Zone A Floodplain
Permanent Road Closure	Zone AE Floodplain
Alternative 4	Zone AE Floodway
Alternative 11	Municipal Boundary
Alternative 12	

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Potential 100-Year FEMA Floodplain Impacts – Alternatives 4, 11, and 12

Figure

4.7-1d

4.8 Natural Resources

Elements of the natural environment include threatened and endangered species and natural habitats and landforms and soils. The natural resources present in the study area were assessed to identify potential impacts on the natural environment that could occur as a result of the proposed project. More information can be found in the *Bishopville Truck Route Project Natural Resources Technical Memorandum* (2021) in **Appendix L**.

4.8.1 What laws and regulations protect natural resources?

The *Endangered Species Act (ESA) of 1973,* as amended, requires federal agencies in consultation with and assisted by the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species.

The *Migratory Bird Treaty Act of 1918* (*MBTA*) implements four international conservation treaties that the United States entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended. The *MBTA* prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

4.8.2 How were natural resources assessed for impacts?

The assessment of the threatened and endangered species and natural habitats and landforms and soils in the study area consisted of a desktop analysis of data from state and federal databases and site investigations of the footprints of the build alternatives. Review of available mapping and literature research included: USGS topographic quadrangles; USDA NRCS soil survey database; USFWS NWI data; USFWS at-risk, candidate, threatened, and endangered species county listings; USFWS Information for Planning and Conservation (IPaC) site-specific resources lists; SCDNR inventory of rare, threatened, and endangered species known to occur in Lee County; SCDHEC watershed atlas; and SCDHEC Integrated Report for 2018 Section 303(d) List of Impaired Waters. The SCDNR and the USFWS Endangered Species websites were consulted in 2019 and again in January 2020 regarding current federally listed Threatened and Endangered Species in Lee County. Field visits were conducted to verify NWI data and assess the potential for protected species habitat.

4.8.3 What natural resources are in the project study area?

4.8.3.1 Threatened and Endangered Species

Three federally endangered species were identified through data searches (**Table 4.8-1**). During field visits conducted November 6-7, 2019, no suitable habitat for these protected species was identified in the project area. No critical habitat was identified in or directly adjacent to the project area.

Table 4.8-1. Federally Endangered Species that Could Occur in the Study Area

Common Name	Scientific Name	Federal Status	State Status	Determination of Effect
Red-cockaded woodpecker	*Picoides borealis*	Endangered	Endangered	No Effect
Canby's dropwort	*Oxypolis canbyi*	Endangered	Not Listed	No Effect
American chaffseed	*Schwalbea americana*	Endangered	Not Listed	No Effect

Source: (2021). *Bishopville Truck Route Project Natural Resource Technical Memorandum.*

Red-Cockaded Woodpecker

The red-cockaded woodpecker (*Picoides borealis*) is found in the southeastern United States from Florida to Virginia and west to southeast Oklahoma and eastern Texas. The red-cockaded woodpecker prefers mature, open pine stands with an undeveloped or low understory layer for its nesting habitat. Foraging habitat is frequently limited to pine or pine-hardwood stands that are 30 years or older, with a preference for pine trees with a diameter of 10 inches or larger. Fields review of the project area did not reveal the presence of mature, open pine stands with low understory coverage, as preferred by the red-cockaded woodpecker. ***Determination of Effect: No Effect***.

Canby's Dropwort

Canby's dropwort (*Oxypolis canbyi*) belongs to the mint family (*Apiaceae*). It is a perennial herb that grows from 80 to 120 cm (30 to 50 in.) tall. The quill-like hollow leaves and the thick, corky wings that extend out from the margins of the fruit are the most distinctive features of the plant. The Canby's dropwort generally prefers hydric soils with a seasonal high-water table. No pineland ponds or open cypress ponds preferred by Canby's dropwort were identified in the project area. Field reviews did not reveal the presence of any pineland ponds and savannas, wet meadows, or open moist pine flatwoods, as preferred by Canby's dropwort. ***Determination of Effect: No Effect***.

American Chaffseed

The American chaffseed (*Schwalbea americana*) is a perennial herb with large purplish-yellow, tubular flowers. Flowering occurs from April to June in the South. American chaffseed prefers fire-maintained areas, such as wet savannas and open moist pine flatwoods, and is found in sandy soils (moist to dry) of the coastal plain. This species is also documented to occur in open grass and sedge systems. American chaffseed depends on a fluctuating water table and frequent fire to maintain the open habitat that it requires. Field reviews did not reveal the presence of any wet meadows, savannas, or open moist pine flatwoods, as preferred by American chaffseed. The open grass areas in the project area are active agricultural fields and are not fire maintained, which limits their suitability as a habitat for American chaffseed. ***Determination of Effect: No Effect***.

4.8.3.2 Landform and Soils

The project study area is located in the Southeastern Plains ecoregion. The area contains plains with broad interstream areas that have a mosaic of cropland, pasture, woodland, and forest. The natural vegetation was mostly longleaf pine, with smaller areas of oak-hickory-pine. Over the years, practices including pine tar production, logging, open range cattle and feral hog grazing, agriculture, and fire suppression have resulted in the large decline of the longleaf pine forests.

The study area is located in the Pee Dee River Basin. The South Carolina portion of the Pee Dee River Basin flows from the Piedmont and Sandhills regions of the state to the Upper and Lower Coastal Plain and Coastal Zone regions. The area is dominated by agricultural land uses, including row crop operations, active pasture, and nursery production. A limited amount of silvicultural production is also located in the area. Very few areas of agricultural land in the study area are fallow.

There are 16 different soil classifications identified in the project study area by the USDA NRCS. The study area is primarily comprised of Cecil sandy loam with occasional clay, of varying slopes, and partially eroded. Additionally, narrow strips of Cecil-Bethlehem complex sandy loam and sandy clay loam appear throughout. Soil survey maps and further discussion of existing soil types can be found in the *Bishopville Truck Route Project Farmlands Technical Memorandum* (2021) in **Appendix E**.

4.8.3.3 Natural Habitats

The project study area is generally comprised of disturbed or maintained land, as the vast majority of habitats present in the study area have been manipulated by past land management practices to facilitate improved drainage for agricultural land uses. Land development and agricultural practices have altered the original natural habitats for the area. As previously noted, long-leaf pine originally dominated the area. Naturally occurring habitats in the study area have been identified and categorized based on their vegetation, location, past alteration, and hydrologic characteristics. Vegetation surrounding the maintained or disturbed land is mainly low-growing grasses and herbs. Roadway fill, roadside landscaping, maintained slopes, drainage features, and impervious materials associated with travel ways can be found along the roadway network. A substantial portion of the disturbed land is classified as agricultural. Varying agricultural practices dominate the land, including row crop operations, active pasture, and nursery production.

Natural habitats in the study area are located near stream and wetland areas. The majority of these features are mixed hardwood and mixed pine-hardwood drainageways that drain to either the Lynches River to the east and southeast or the Black River to the south. These features are typical of the inner coastal plain common throughout the region. The vast majority of habitats in the project study area were manipulated by past land management practices to facilitate improved drainage for adjacent agricultural and urban land uses. Streams were partially or fully channelized, which has eliminated or reduced the number of adjacent wetland areas.

Mixed Pine/Hardwood Forest

Mixed pine/hardwood forest is primarily located near stream and wetland areas in the proposed project area. They consist of early-successional hardwood pine forest with canopy species of loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). Understory species include Carolina laurel cherry (*Prunus caroliniana*), American holly (*Ilex opaca*), southern magnolia (*Magnolia grandiflora*), and water oak. A limited amount of silvicultural production is also located in the vicinity of the proposed project area.

Freshwater Emergent Wetland

Freshwater emergent wetlands contain herbaceous graminoid and forbs species such as fall panic grass (*Panicum dichotomiflorum*) and soft rush (*Juncus effuses*).

Freshwater Forested/Shrub Wetland

Forested wetlands are located in the drainageways and adjacent to the streams in the proposed project area. Common canopy species include red maple (*Acer rubrum*), sweetgum, and blackgum (*Nyssa sylvatica*). Common understory species include fetter-bush (*Lyonia lucida*), large gallberry (*Ilex coriacea*), Chinese privet (*Ligustrum sinense*), and giant cane (*Arundinaria gigantea*).

Freshwater Pond

A small pond is present in the northeast section of the project area in mixed pine/hardwood forest.

Riverine

Perennial and intermittent channels are present in the proposed project area. The streambed substrates are primarily clayey silts and sands, with gravel and cobble present. They have been channelized and contain steep, eroded banks.

4.8.4 How would the alternatives impact natural resources?

4.8.4.1 Threatened and Endangered Species Consultation

No-Build Alternative

The No-Build Alternative would have no effect on any threatened and endangered species.

Build Alternatives

The SCDNR online inventory and USFWS IPaC database report showed three documented Federally endangered species known to occur in Lee County: red-cockaded woodpecker (*Picoides borealis*), Canby's dropwort *(Oxypolis canbyi*), and the American chaffseed (*Schwalbea americana*). A review of SCDNR occurrence data for the Bishopville East, SC and Bishopville West, SC US Geological Survey 7.5-minute topographic quadrangle maps revealed no documented occurrences of the listed species in the immediate vicinity of the project.

The field review of the project area did not reveal the preferred habitats required by the documented federally endangered species described above. Based on the lack of suitable habitat and no observations of the listed species during field surveys, results of the biological assessment indicate that the proposed action would have no effect on threatened or endangered species. A request to initiate ESA Consultation was sent to USFWS on January 13, 2020. On January 14, 2020, USFWS responded stating they know of no threatened or endangered species in the project area and that the May 30, 2019, USFWS Clearance Letter for Species and Habitat Assessments should be used. Based on this letter, no further coordination with USFWS is necessary at this time, and Section 7 consultation was concluded. Additional information and USFWS correspondence can be found in the *Bishopville Truck Route Project Natural Resources Technical Memorandum* (2021) in **Appendix L**.

4.8.4.2 Landform and Soils

Construction activities associated with the project would result in permanent impacts on the soils. Mechanized clearing and grubbing of vegetation for equipment access and operation would also result in temporary soil impacts. More information on construction-related impacts is in **Section 4.12**.

4.8.4.3 Natural Habitats

No-Build Alternative

The No-Build Alternative would have no effect on natural habitats.

Build Alternatives

Alternative 7 is estimated to have the greatest impact on natural habitats (about 12 acres), consisting mostly of mixed pine/hardwood forest. Alternatives 4 and 12 are estimated to have the least impact (about 6 acres each), consisting mostly of mixed pine/hardwood forest. Alternative 6 (Preferred Alternative) is estimated to impact roughly 8 acres of natural habitat, about half of which is freshwater forested/shrub wetlands and half of which is mixed pine/hardwood forest. Potential impacts by alternative to natural habits are shown in **Figure 4.8-1a-1d** and **Table 4.8-2**.

4.8.5 How would impacts on natural resources be mitigated?

4.8.5.1 Threatened and Endangered Species

Due to the lack of suitable habitat and because no listed species were observed during field surveys, no mitigation is required. Should any additional species be listed as federally endangered or threatened before construction, consultations would be conducted with the USFWS, as appropriate.

The SCDOT will comply with the *MBTA* to prevent the unlawful taking or killing of migratory birds and the unauthorized destruction of their active nests. Active nests are defined as nests that contain eggs and/or juvenile birds; the nest is considered active until all juvenile birds permanently leave the nest. The contractor will notify the Resident Construction Engineer (RCE) at least four weeks before starting work on bridges and box culverts. If an active migratory bird nest is discovered at any time, the contractor will cease work immediately on the structure and notify the RCE. The RCE will notify the Environmental Services Office (ESO) Compliance Division to determine the next course of action. The contractor shall not take/kill a migratory bird or remove/disturb an active migratory bird nest.

4.8.5.2 Landforms and Soils

Mitigation measures should be taken to minimize erosion or sediment runoff resulting from construction activities. Policies identified in 23 CFR 650B and *SC Code of Regulations 72-400* will be used to implement construction best management practices (BMPs). The SCDOT *Supplement Technical Specification for Seeding* (2017) will be used to stabilize any exposed soils.

4.8.5.3 Natural Habitats

Potential impacts will be minimized during construction of the project. To mitigate natural habitat loss as a result of the project, the SCDOT would consider planting native trees in the ROW adjacent to new or improved roadways outside of required clear safety zones.

Table 4.8-2. Potential Impacts on Habitat Types

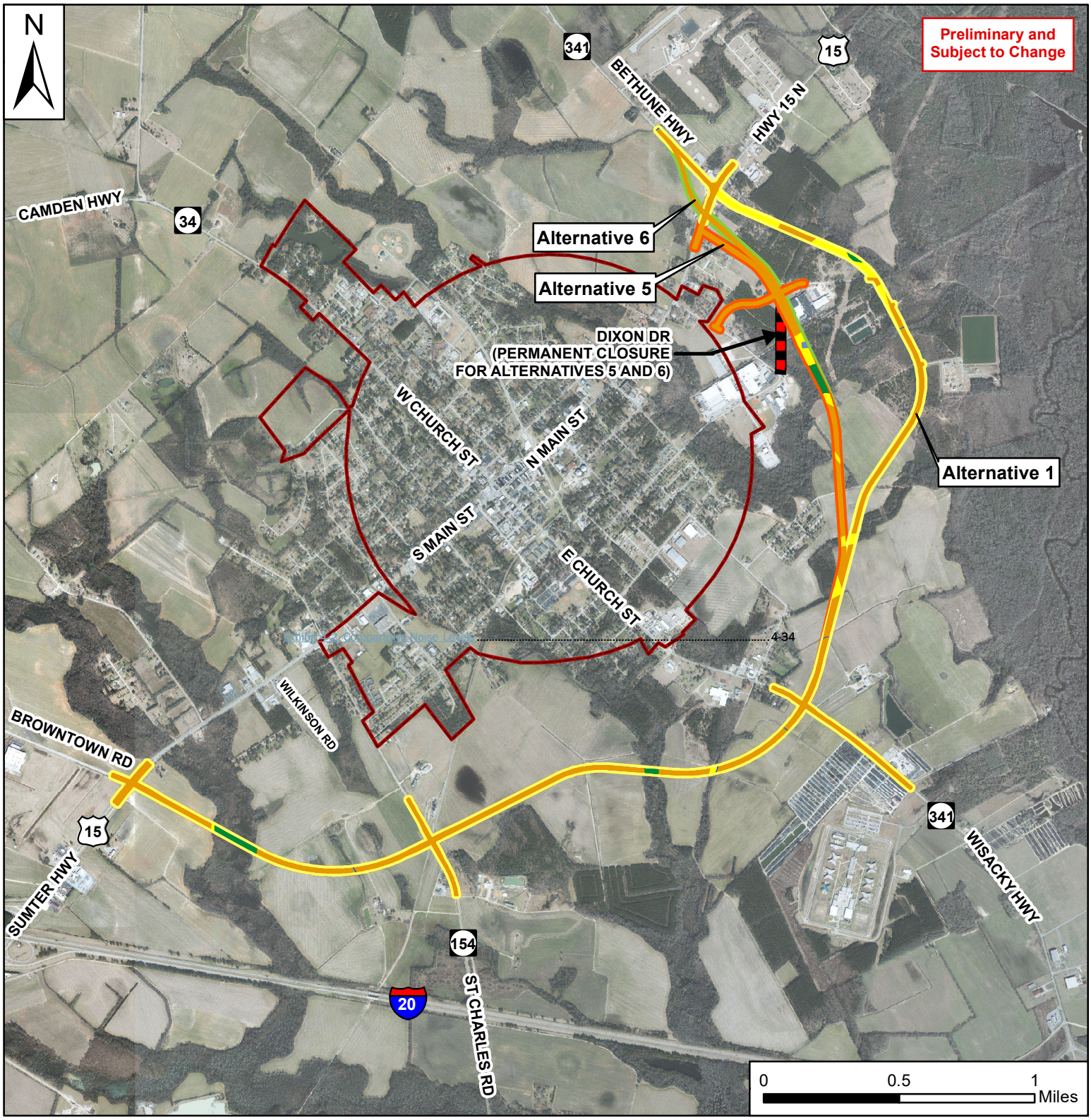
Alternative	Mixed Pine/ Hardwood Forest (acres)	Freshwater Emergent Wetland (acres)	Freshwater Forested/ Shrub Wetlands (acres)	Freshwater Pond (acres)	Riverine (acres)	Total (acres)
No-Build	0.0	0.0	0.0	0.0	0.0	**0.0**
Alternative 1	8.0	<0.1	3.1	0.0	0.3	**11.4**
Alternative 2	4.7	1.1	3.1	0.1	0.1	**9.1**
Alternative 3	4.8	<0.1	1.9	0.3	0.2	**7.2**
Alternative 4	3.5	0.0	1.9	0.3	0.2	**5.9**
Alternative 5	3.7	0.0	4.0	0.1	0.2	**8.0**
Alternative 6 (PA)	3.6	0.0	4.0	0.3	0.2	**8.1**
Alternative 7	8.9	1.1	2.2	0.0	0.2	**12.4**
Alternative 8	4.6	1.1	3.1	0.3	0.2	**9.3**
Alternative 9	9.1	<0.1	1.1	0.0	0.2	**10.4**
Alternative 10	4.9	<0.1	1.9	0.1	0.1	**7.0**
Alternative 11	7.9	<0.1	1.1	0.0	0.2	**9.2**
Alternative 12	3.6	0.0	1.9	0.1	0.1	**5.7**

Source: (2021). *Bishopville Truck Route Project Natural Resources Technical Memorandum.*
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Maintained/Disturbed Land
Mixed Pine/Hardwood Forest
Riverine
Municipal Boundary
Alternative 1
Alternative 5
Alternative 6

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Terrestrial Communities – Alternatives 1, 5, and 6

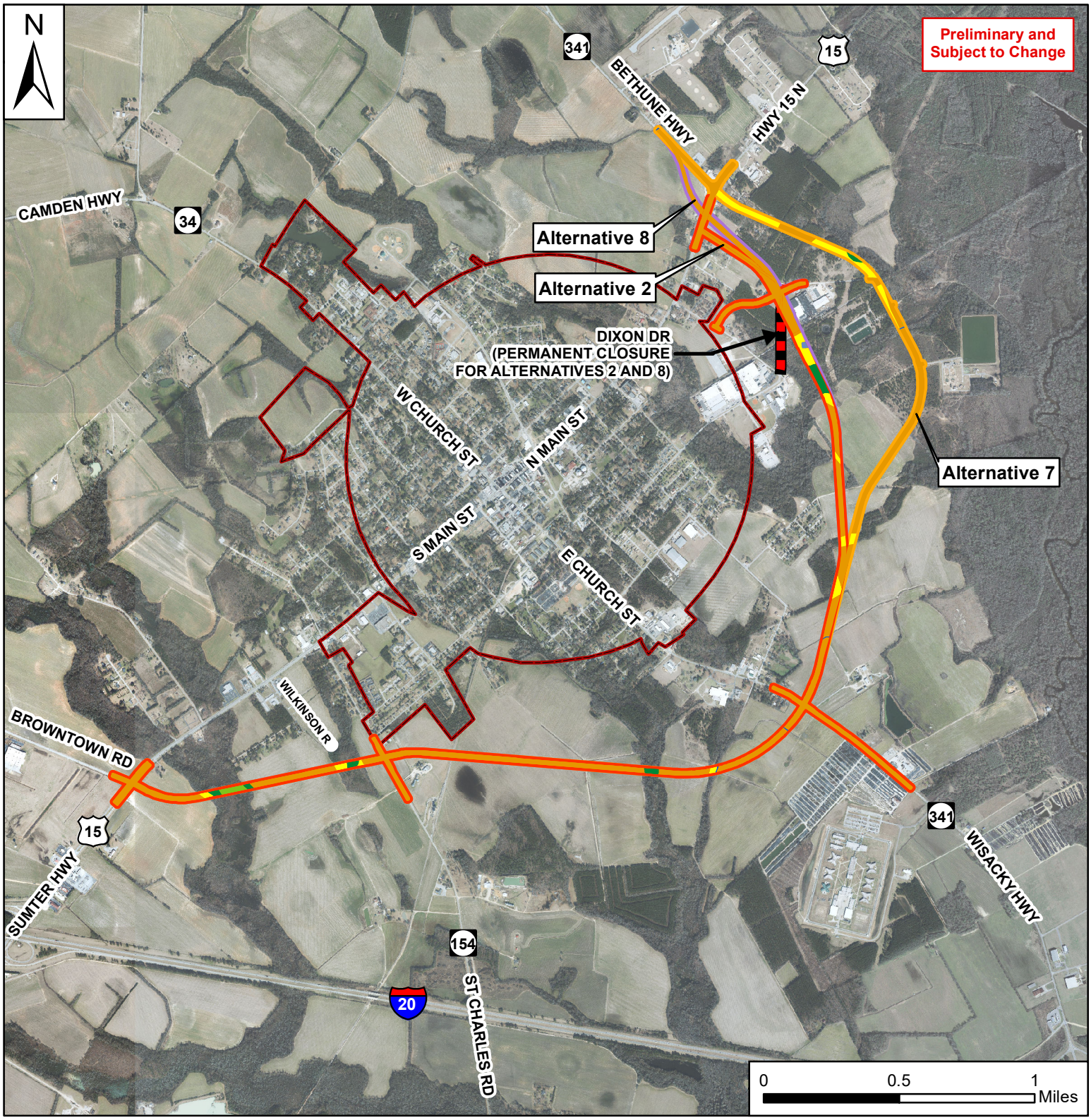
Figure

4.8-1a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Maintained/Disturbed Land
Mixed Pine/Hardwood Forest
Riverine
Municipal Boundary
Alternative 2
Alternative 7
Alternative 8

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Terrestrial Communities – Alternatives 2, 7, and 8

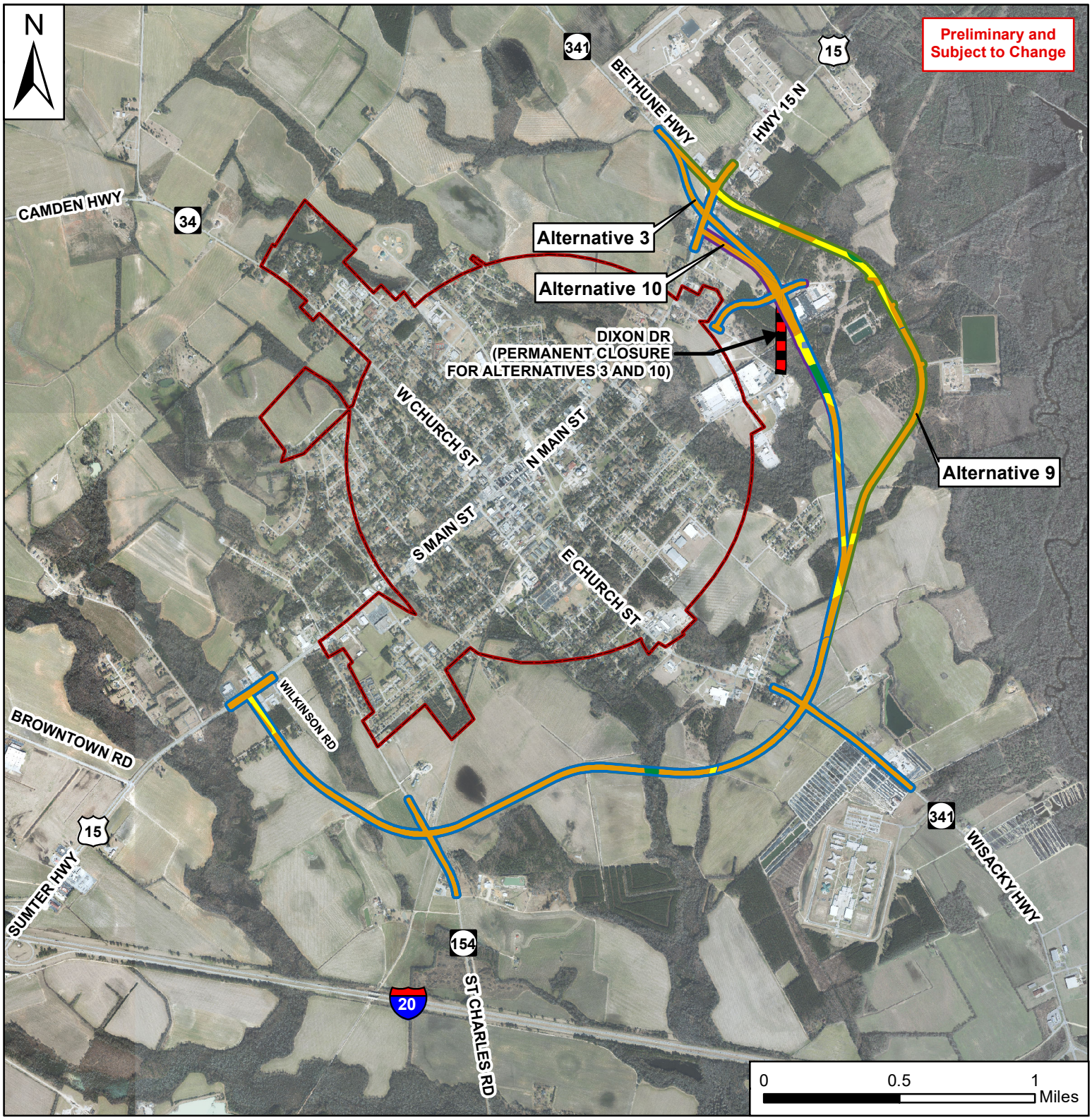
Figure

4.8-1b

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration

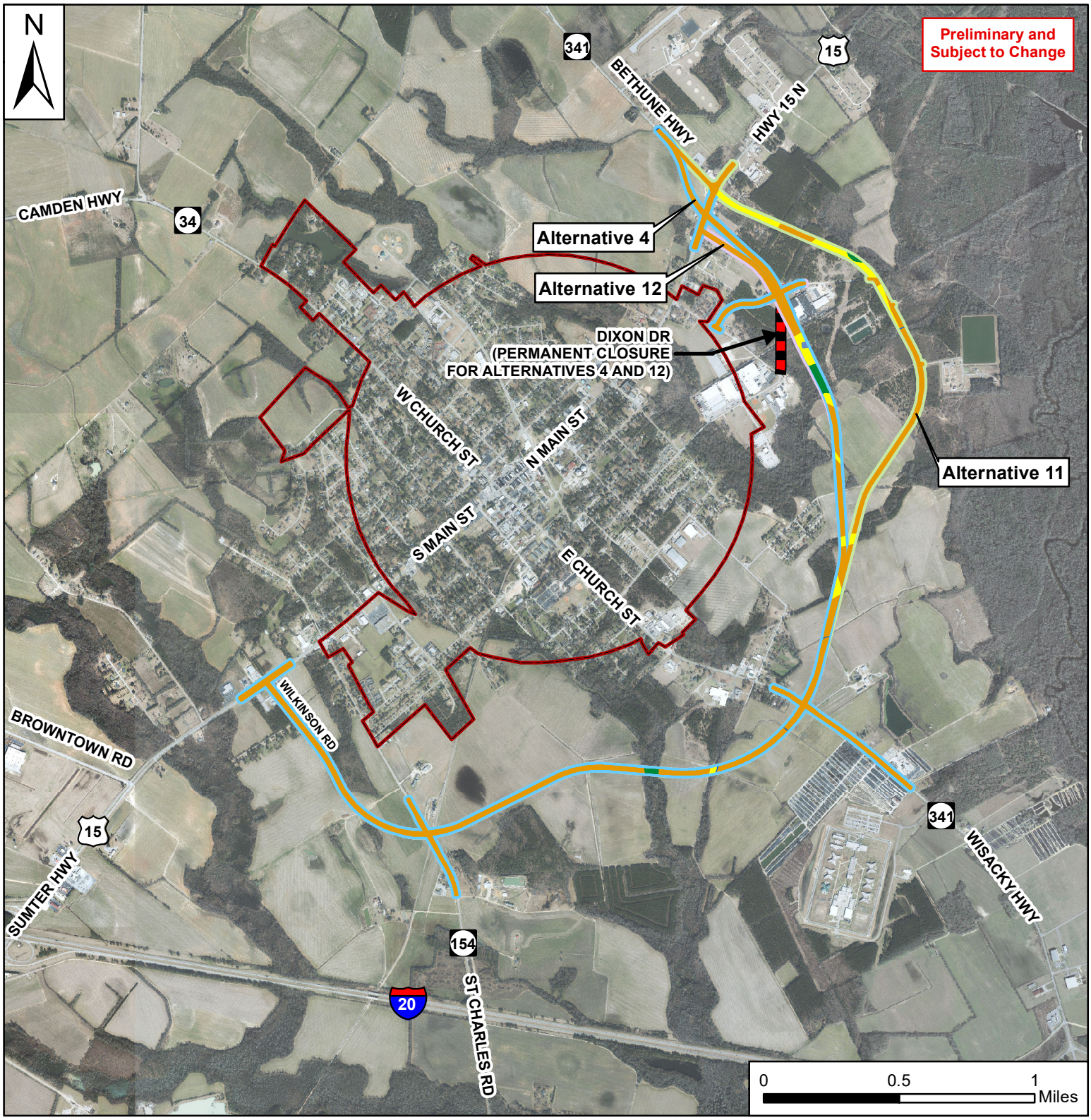


Permanent Road Closure	Maintained/Disturbed Land	Alternative 3	***Bishopville Truck Route Project Draft Environmental Impact Statement***		
Freshwater Emergent Wetland	Mixed Pine/Hardwood Forest	Alternative 9	***March 2022***		
Freshwater Forested/Shrub Wetland	Riverine	Alternative 10	**Terrestrial Communities – Alternatives 3, 9, and 10**	**Figure**	**4.8-1c**
Freshwater Pond	Municipal Boundary				

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Permanent Road Closure
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Maintained/Disturbed Land
Mixed Pine/Hardwood Forest
Riverine
Municipal Boundary
Alternative 4
Alternative 11
Alternative 12

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Terrestrial Communities – Alternatives 4, 11, and 12

Figure

4.8-1d

4.9 Cultural Resources

This section summarizes the *Bishopville Truck Route Project Cultural Resources Assessment* (2021), which can be found in **Appendix O**.

4.9.1 How are cultural resources regulated?

Historic districts and properties (including archaeological sites) are resources protected under *Section 4(f) of the United States Department of Transportation (USDOT) Act* and *Section 106 of the National Historic Preservation Act (NHPA) of 1966*, as amended. *Section 106 of the NHPA* requires federal agencies to consider the effects of their undertakings on historic properties (including archaeological sites). Historic properties are districts, sites, buildings, structures, and objects associated with American history, architecture, engineering, and culture listed on or eligible for listing on the United States Department of Interior's National Register of Historic Places (NRHP). Historic properties are generally 50 years old or older and are considered eligible for NRHP listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet certain criteria. Cemeteries and human remains are also protected by South Carolina law.

Cultural Resources

Cultural resources include archaeological sites and historic architectural resources.

4.9.2 How were cultural resources identified?

A *Reconnaissance-Level Archaeological Survey* (2018) and *Phase I Architectural Survey* (2018), were conducted to identify historic properties and locations that may be affected by the project. The study area for the survey included the alternatives corridors and an Area of Potential Effects (APE) extending 300 feet from the edges of the build alternatives. The APE is the area in which the proposed project could directly or indirectly cause alterations in character or use of historic properties. The analysis consisted of a review of the digital site files and GIS database maintained by the South Carolina Institute of Archaeology and Anthropology (SCIAA) and the South Carolina Department of Archives and History (SCDAH), ArchSite, and previous cultural resource reports.[23]

4.9.3 What cultural resources are in the area of potential effects?

4.9.3.1 Architectural

A total of 79 architectural historic resources were individually surveyed. Only one resource, the Thomas Fraser House, is listed on the NRHP. The Thomas Fraser House is on a 1.7-acre parcel that currently operates as a farm. When the property was listed on the NRHP in 1986, the property boundary was drawn to include the parcel, the house, the kitchen outbuilding, and the driveway. The Thomas Fraser House is pictured in the exhibit and is Community Resource Map ID 72 in **Figure 4.3-5a-5d**.

[23] Lockerman and Stephens, 2012; Shepherd, Vasquez, and Pope, 2018

4.9.3.2 Archaeological

The Albert Family Cemetery (38LE1042) is an African American cemetery that possibly dates from the nineteenth and twentieth centuries. This cemetery was identified during the 2018 reconnaissance of an earlier alignment for the Bishopville Truck Route (Shepherd, Vasquez, and Pope 2018). South Carolina law (*SC Code 27-43-10, Removal of Abandoned Cemeteries; 27-43-20, Removal to Plot Agreeable to Governing Body and Relatives; 27-43-30, Supervision of Removal Work; and 16-17600, Destruction of Graves and Graveyards*) protects these cemeteries from harm.

4.9.3.3 Consultation and Coordination with the SHPO and Federally Recognized Tribes

The *NHPA* requires federal agencies involved in an undertaking that could affect resources of religious or cultural significance to federally recognized Native American tribes to consult with those tribes when the location of the federal undertaking is within an area of traditional land use for the tribe, when the location is on tribal land, or where such properties might be affected regardless of the undertaking's location. Consultation under 36 CFR 800 is to occur at a government-to-government level in recognition of the sovereign status of the tribes, which means that the Federal Highway Administration (FHWA) must take the lead in consulting with the tribes. The goal of the consultation is to identify resources of importance to the affected tribes, to assess the nature and extent of the impact on the characteristics of the resources that make them important, and to work through a collaborative process to identify acceptable measures for avoiding, minimizing, or mitigating significant impacts on the resources. The consultations, concurrences, and applicable surveys can be found in **Appendix O**.

On December 14, 2018, the South Carolina Department of Transportation (SCDOT) transmitted electronic copies of the *Reconnaissance-Level Archaeological Survey* (2018) to the South Carolina State Historic Preservation Office (SHPO), the Cherokee Nation, and the Tuscarora Nation, and a physical copy of the report to the Catawba Nation on behalf of FHWA. This report determined that additional evaluation would be needed for the Albert Family Cemetery (38LE1042) and an unnamed possible cemetery if it will be affected by the proposed undertaking. It also determined that additional testing to define the NRHP status of 38LE1037 would be needed if it will be affected by the proposed undertaking. SHPO returned a signed concurrence letter on December 19, 2018, the Catawba Nation returned a signed concurrence letter on January 2, 2019, and the Cherokee Nation returned a signed concurrence letter on January 7, 2019. The Tuscarora Nation did not respond to this consultation.

A *Phase I Archaeological Survey* (2020) was completed for Alternative 6 (Preferred Alternative), which recommended that all archaeological sites were ineligible for the NRHP except for 38LE1047, and additional work would be required. On October 26, 2020, the SCDOT transmitted electronic copies of this report to SHPO, the Cherokee Nation, and the Tuscarora Nation, and a physical copy of the report to the Catawba Nation on behalf of FHWA. SHPO returned a signed concurrence letter on October 26, 2020, and the Catawba Nation returned a signed concurrence letter on November 20, 2020. The Cherokee Nation and the Tuscarora Nation did not respond to this consultation.

A *Phase II Evaluation of Site 38LE1037* (2020) was completed for Alternative 6 (Preferred Alternative), which recommended that 38LE1037 was ineligible for the NRHP. On October 26, 2020, the SCDOT transmitted electronic copies of this report to SHPO, the Cherokee Nation, and the Tuscarora Nation, and a physical copy of the report to the Catawba Nation on behalf of FHWA. SHPO returned a signed concurrence letter on October 27, 2020, and the Catawba Nation returned a signed concurrence letter on November 20, 2020. The Cherokee Nation and the Tuscarora Nation did not respond to this consultation.

4.9.4 How would the alternatives impact cultural resources?

The number of cultural resources that could be affected by the alternatives is shown in **Table 4.9-1**.

Table 4.9-1. Significant or Potentially Significant Cultural Resources Affected

Cultural Resource	Alternative												
	No-Build	1	2	3	4	5	6 (PA)	7	8	9	10	11	12
Thomas Fraser House	0	0	0	1	1	0	0	0	0	1	1	1	1
Total Resources	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**1**

Source: (2021). *Bishopville Truck Route Project Cultural Resources Assessment.*
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

4.9.4.1 No-Build Alternative

The No-Build Alternative would not affect any significant or potentially significant cultural resources.

4.9.4.2 Build Alternatives

Alternatives 1, 2, 5, 6, 7, and 8 are not anticipated to affect any cultural resources; Alternatives 3, 9, and 10 could affect the NRHP-listed Thomas Fraser House viewshed; and Alternatives 4, 11, and 12 could affect the Thomas Fraser House property and viewshed. Additional information can be found in the *Bishopville Truck Route Project Cultural Resources Assessment* (2021) in **Appendix O**.

4.9.5 How would impacts on cultural resources be mitigated?

When the Thomas Fraser House historic property was listed on the NRHP in 1986, the property boundary was drawn to include the parcel, house, kitchen outbuilding, and driveway. Avoidance of direct effects on the property and the viewshed is recommended. Care should be taken to avoid any shifts in the project that would require any ROW from the parcel.

While the Thomas Fraser House has a generous setback of almost 400 feet, the tree-lined driveway is considered part of the resource, and effects to its historic viewshed should be minimized. Removal of historic landscape vegetation impacting the historic viewshed should be avoided. Indirect impacts on the historically rural nature of the resource, including construction traffic and noise, should be minimized.

During construction, the contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations. If any such remains are encountered, the Resident Construction Engineer (RCE) and SCDOT's Construction Manager would be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise. If previously unknown tribal artifacts, items of cultural significance, and/or human remains are discovered, the resources will be handled according to 36 CFR 800.11 in coordination with the SHPO and appropriate Tribal Historic Preservation Office.

4.10 Hazardous Materials

Due to the potential to affect project cost and schedule, investigations and assessments of potentially contaminated sites were conducted and are documented in the *Bishopville Truck Route Project Hazardous Materials/Waste Survey* (2021), which can be found in **Appendix P**.

4.10.1 How are hazardous materials regulated?

Hazardous materials are regulated by state and federal laws. The *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA),* commonly known as Superfund, and the *Resource Conservation and Recovery Act of 1976 (RCRA)* are the primary federal laws set in place to regulate hazardous materials and waste. The *CERCLA* aims to identify and clean up closed or abandoned hazardous waste sites to reduce potential contamination and protect human health and the environment.[24] The *RCRA* gives the EPA control of hazardous waste from "cradle-to-grave."[25]

4.10.2 How were hazardous sites identified and evaluated?

Hazardous material and hazardous waste sites were identified using Environmental Record Search (ERS), a third-party property due diligence company that produces comprehensive property reports. An ERS study report was created on November 19, 2019, identifying any current or potential properties of concern related to any soil or groundwater contamination or properties that could potentially contain hazardous waste.

Hazardous Waste Sites

Hazardous waste sites are defined as having hazardous materials with characteristics that make them dangerous or capable of having a harmful effect on human health and the environment.

The ERS originally identified 52 potential contamination sites within the American Society for Testing and Materials (ASTM) Standard E1527-13 search distances (variable by database up to a one-mile radius) of the project study area. The original 52 sites were identified based on the type of hazardous material site or database listing, potential contaminant, history of release, and distance from the site to the project study area. After reviewing the report, five sites were identified as sites of concern due to the proximity of the site and/or the occurrence of past violations relating to hazardous materials discharge. These five sites are found in databases with listed contamination, have active and ongoing remediation, have not received a closure status update, or have had past releases in immediate proximity to the project study area.

The online SCDHEC Underground Storage Tanks (USTs) and dry-cleaning facility registries were reviewed to determine if any former or current sites of concern were listed in the SCDHEC UST registry database and Dry-Cleaning Facility Restoration Trust Fund (DFRTF) list. There were no additional sites of potential concern noted from these sources. The 52 sites are discussed in further detail in the *Bishopville Truck Route Project Hazardous Materials/Waste Survey* (2021), which can be found in **Appendix P**.

24 EPA. (2018, June 4). *Superfund: Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Overview*. Retrieved March 2020 from https://www.epa.gov/superfund/superfund-cercla-overview.
25 EPA. (n.d.). *Summary of Resource Conservation and Recovery Act.* Retrieved March 2020 from https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act.

4.10.3 What hazardous waste sites are present in the area?

Several facilities store hazardous materials throughout the study area. Facilities such as gas stations, former gas stations, auto repair facilities, and dry cleaners are generally located along Main Street (US 15) inside the Bishopville city limits. The Lee County landfill is located south of I-20 and east of Sumter Highway (US 15), outside of the study area. There are two Industrial parks located near I-20. James Industrial Park is located off Wisacky Highway (SC 341) in the southeast and the I-20 Industrial Center is located off Browntown Road in the southwest.

There are five sites identified in or near the project study area that have the potential to contain hazardous waste. A site reconnaissance was conducted on December 17, 2019, to verify the findings of the records review. The five sites were visited and photographed. The process consisted of a windshield survey and did not include going inside buildings or behind/inside fenced properties. The project study area was surveyed to determine if there were potential properties of concern related to soil or groundwater contamination or properties that could potentially contain hazardous waste. These sites are presented in **Table 4.10-1** and **Figure 4.10-1a-1d**. The sites were analyzed and categorized as being of high, moderate, or low concern to the project, described below:

- **High concern:** sites with documented releases of contamination that have not been remediated or are being remediated.
- **Moderate concern:** sites with former hazardous materials (such as USTs) with documented releases of contamination that have been remediated and received a No Further Action (NFA) designation from either state or federal regulatory agencies or that have insufficient documentation about the status of the removal or presence of contamination.
- **Low concern:** sites within the ASTM Standard E1527-13 minimum search distance, but due to distance or hydrologic barriers, the sites have a low probability of either being impacted by the proposed project or having contamination that has migrated into footprints of the proposed build alternatives.

There is one site of high concern located in or directly adjacent to the build alternative footprints, identified in **Figure 4.10-1a-1d**. The site, Speedway 233, is a former gas station located on Main Street (US 15). As shown in **Figure 4.10-1a-1d**, the Speedway building and pumping stations are no longer present on the site. Speedway 233 had a reported release from a leaking underground storage tank (LUST) in 1991 and remediation activities were observed during site reconnaissance.

Several monitoring wells were observed on the property, along with an active soil vapor extraction (SVE) and air sparging system. There is a total of four abandoned USTs: three 6,000-gallon USTs and one 4,000-gallon UST. The site is listed as open in the LUST database.

Table 4.10-1. Potential Hazardous Waste Sites of Concern

Site	Summary Information	Violations	Site Potentially Impacted by Alternative											
			1	2	3	4	5	6 (PA)	7	8	9	10	11	12
Site of High Concern														
Speedway 233 (816 N. Main Street)	Release reported on May 20, 1991. Underground storage tanks (three former 6,000-gallon USTs, one former 4,000-gallon UST abandoned) Site reconnaissance identified an active soil vapor extraction (SVE) and air sparging system currently present on-site, indicating active remediation.	Release reported (1991)	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes
Sites of Moderate Concern														
Lee County Public Works/Airport Road (116 Airport Road)	Release reported on May 17, 1999. Free product (petroleum) recovery only. Underground storage tanks (two registered 10,000-gallon USTs, two former 10,000-gallon USTs abandoned)	Leaking underground storage tanks (1999)	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No
Mixon Logging (760 Highway 15)	Aboveground storage tanks (one registered 1,000- to 2,000-gallon AST, two registered 10,000- to 42,000-gallon ASTs) Several 250-gallon ASTs and 55-gallon drums present.	None	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reeves Brothers (401 Dixon Drive)	Underground storage tanks (two former 10,000-gallon USTs abandoned, two former 3,000-gallon USTs abandoned, one former 2,000-gallon UST abandoned) and aboveground storage tanks (three of unknown size) Formerly registered as a textile manufacturer, now closed. Formerly registered to handle sodium hydroxide and biphenyls, site is now closed.	None	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lee County/Jordan Lane (199 Jordan Lane)	Aboveground storage tanks (one 7,500-gallon AST in use, one 7,500-gallon water tank in use, and one 5,000-gallon mixing tank in use). Groundwater and soil contamination present.	Leaking aboveground storage tanks (unknown)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: (2021). *Bishopville Truck Route Project Hazardous Materials/Waste Survey.*

There are four sites of moderate concern within or adjacent to the build alternatives' footprints, identified in **Figure 4.10-1a-1d**. A site on Airport Road, Lee County Public Works, is categorized as a site of moderate concern. The site had a reported release of hazardous materials in 1999 but no evidence of former tanks exists at the location identified in the ERS report. The tanks may be still present on the property to the north of the reported location, but that property is well outside of the current footprint of the proposed alternatives. While the exact location of the historic release is unknown, portions of the parcel are located within one-quarter of a mile of the build alternatives. Therefore, the site is of moderate concern.

Mixon Logging (**Figure 4.10-1a-1d**) is categorized as a site of moderate concern. No reported releases have occurred at this facility. Two large (greater than 10,000-gallon) ASTs, one small (1000- to 2000-gallon AST), several 250-gallon ASTs, and multiple 55-gallon drums indicate that the facility has the potential for a past release of hazardous materials. This property overlaps with the footprints of the build alternatives. Due to the potential for past release and location of the site, the site is of moderate concern.

Reeves Brothers (**Figure 4.10-1a-1d**) is categorized as a site of moderate concern. No reported releases have occurred at this facility. However, three large ASTs identified during site reconnaissance and the former presence of five USTs containing sodium hydroxide and biphenyls indicate that the facility has the potential for a past release of hazardous materials. This property overlaps with the footprints of the build alternatives. Due to the potential for past release and location of the site, the site is of moderate concern.

Lee County on Jordan Lane is categorized as a site of moderate concern (**Figure 4.10-1a-1d**). Groundwater and soil contamination were reported at this site at an unknown date. Three ASTs larger than 1,000 gallons were observed during site reconnaissance, but no evidence of a past release was identified. This property overlaps with the footprint of the alternatives. While the exact location of the reported contamination is unknown, based on the evaluation of historic and current aerial photographs and site reconnaissance, contamination could be approximately 800 feet from the footprints of the alternatives. Due to the past release and unknown locations of contamination, the site is of moderate concern.

No sites of low concern were identified. Based on the lack of proximity to the build alternative footprints, several facilities, including the landfill and industrial parks, are not expected to be impacted by the proposed project.

4.10.4 How would the alternatives impact hazardous materials?

All build alternatives have the potential to impact either four or five of the previously identified hazardous waste sites of concern. Potential groundwater contamination and impacts on human health and/or the surrounding environment are possible with all of the build alternatives.

4.10.4.1 No-Build Alternative

The No-Build Alternative would have no impacts on or from hazardous materials.

4.10.4.2 Build Alternatives

Alternatives 1, 7, 9, and 11 could potentially impact or be impacted by Lee County Public Works/Airport Road, Mixon Logging, Reeves Brothers, and Lee County/Jordan Lane. Alternatives 2, 5, 10, and 12 could potentially impact or be impacted by Speedway 233, Mixon Logging, Reeves Brothers, and Lee County/Jordan Lane. Alternatives 3, 4, 6 (Preferred Alternative), and 8 could potentially impact or be impacted by Speedway 233, Lee County Public Works/Airport Road, Mixon Logging, Reeves Brothers, and Lee County/Jordan Lane.

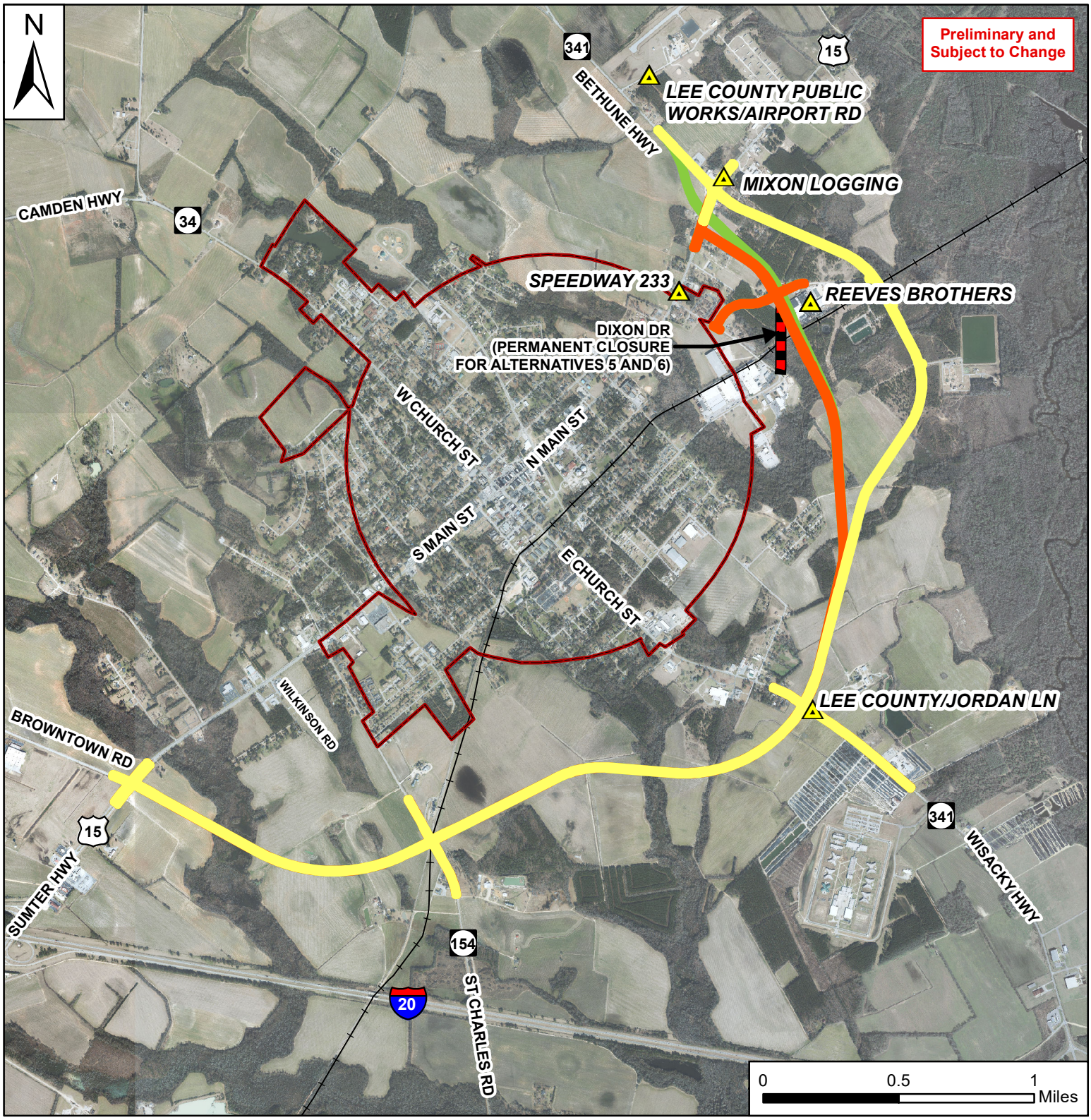
4.10.5 How would hazardous material impacts be mitigated?

The primary mitigation measure is avoiding or minimizing impacts on potential hazardous sites. It is SCDOT's policy to avoid the acquisition of USTs and other hazardous materials, if possible. When it is not possible to avoid impacts on hazardous sites, tanks, and other hazardous materials would be tested, removed, and/or treated in accordance with EPA and SCDHEC requirements. In dealing with hazardous materials and hazardous waste sites, several plans would be developed to protect human health and the environment surrounding the proposed project. These plans include:

- A *Hazardous Waste Management Plan*: identifying the proper way to handle hazardous materials during the construction phase of the project.
- An *On-Site Health and Safety Plan*: giving guidance on construction activities to protect human health and the environment.
- A *Spill Prevention, Control, and Countermeasures Plan (SPCC)*: identifying the proper way to handle oils or oil-based products during construction, in accordance with 40 CFR Part 112.

Any previously unidentified contaminations will be evaluated and addressed according to regulatory requirements. If hazardous spills are found, SCDHEC will be informed and measures will be set forth to avoid and reduce environmental impacts. Any properties partially or wholly acquired for this project and where construction would occur may require further inspection and assessment. Before right-of-way acquisition, a hazardous materials site assessment will be performed to determine levels of contamination at any potential hazardous materials sites near the Preferred Alternative.

Construction activities associated with the project have the potential to encounter lead-based paint and asbestos-containing materials during the demolition of buildings. The release of these materials would affect both the health and safety of the workers but might pose risks to human health and the environment. Therefore, hazardous materials should be managed and disposed of properly to an appropriately permitted facility to minimize impacts during the cleanup process. Activities may be monitored by a professional that is certified in the removal, handling, and disposal of lead-based paint and/or asbestos-containing materials.



Identified Hazardous Waste Site

Permanent Road Closure

SCRF Railroad

Alternative 1

Alternative 5

Alternative 6

Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Identified Hazardous Waste Sites – Alternatives 1, 5, and 6

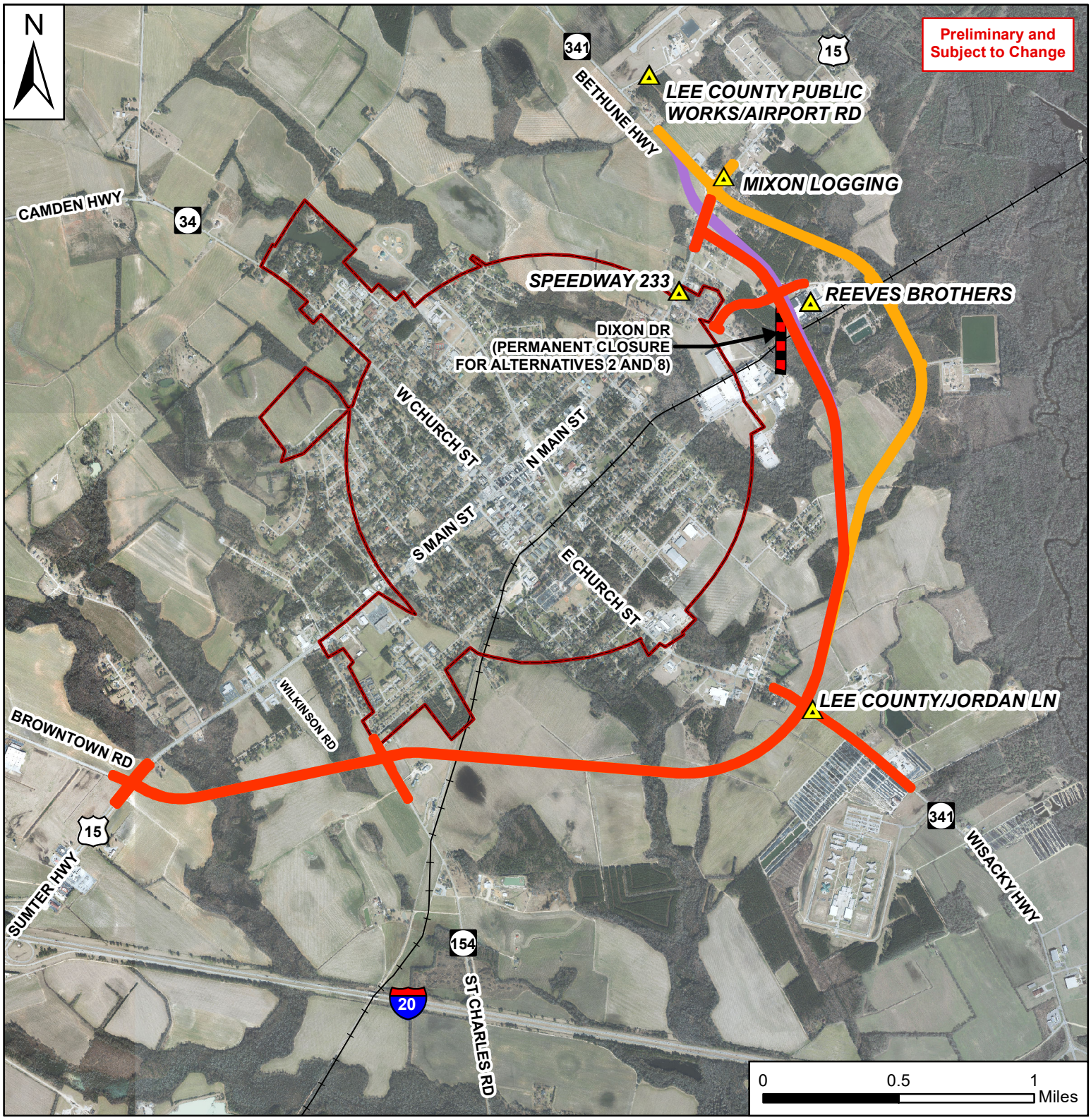
Figure

4.10-1a

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Identified Hazardous Waste Site

Permanent Road Closure

SCRF Railroad

Alternative 2

Alternative 7

Alternative 8

Municipal Boundary

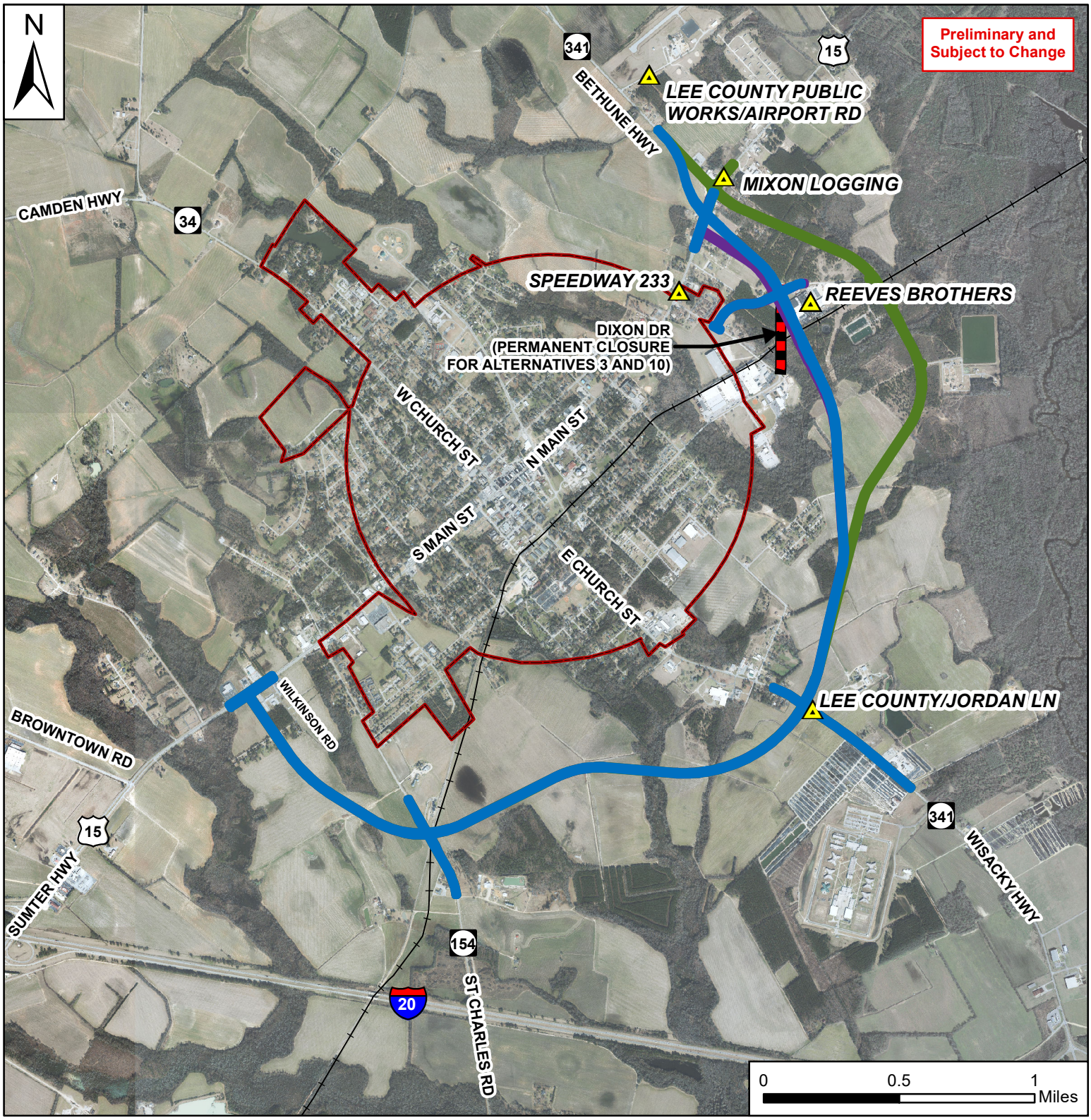
Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Identified Hazardous Waste Sites – Alternatives 2, 7, and 8

Figure

4.10-1b



Identified Hazardous Waste Site

Permanent Road Closure

SCRF Railroad

Alternative 3

Alternative 9

Alternative 10

Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Identified Hazardous Waste Sites – Alternatives 3, 9, and 10

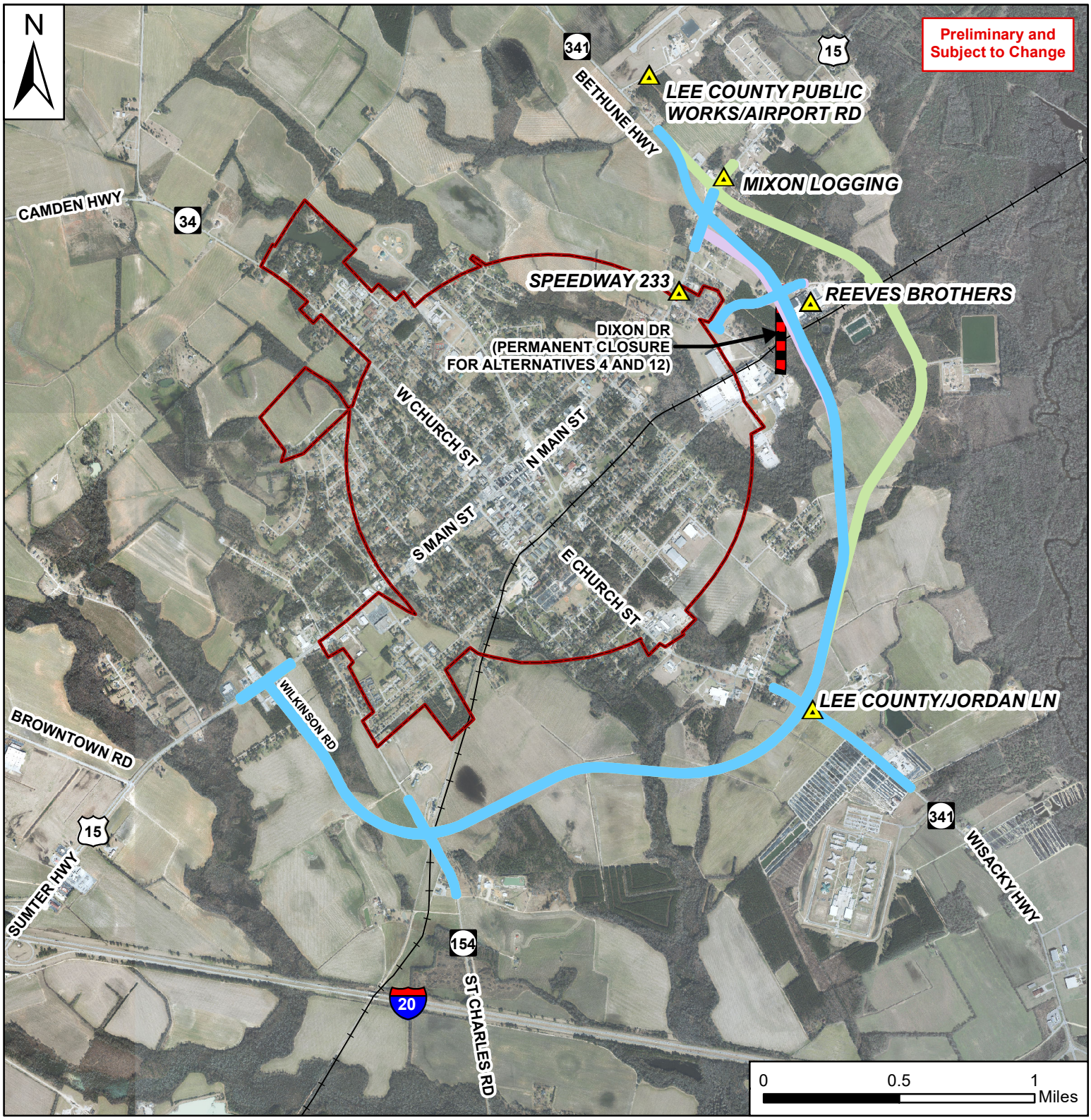
Figure

4.10-1c

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



Identified Hazardous Waste Site

Permanent Road Closure

SCRF Railroad

Alternative 4

Alternative 11

Alternative 12

Municipal Boundary

Bishopville Truck Route Project
Draft Environmental Impact Statement

March 2022

Identified Hazardous Waste Sites – Alternatives 4, 11, and 12

Figure

4.10-1d

4.11 Utilities

This section discusses the potential utility impacts resulting from the proposed project.

4.11.1 How were utilities verified?

Existing utility information was obtained through a field visit, South Carolina 811, GIS mapping, and by contacting known utility owners/operators/service providers in the project study area.[26]

4.11.2 What utilities are located in the project study area?

Utilities in the study area include communications (cable/fiber optics and telephone), electricity, natural gas, sewer, and water. Utilities and service providers in the study area are in **Table 4.11-1**.

Table 4.11-1. Existing Utilities and Utility Providers

Utility	Type	Utility Provider
Communications	Cable/Fiber Optic, Telephone	Charter Spectrum
		Frontier Communications
	Fiber Optics	Systems & Solutions, Inc.
	Telephone	Farmers' Telephone Cooperative (FTC)
Energy	Electricity	Duke Energy (Distribution and Transmission)
	Natural Gas	Dominion Energy
Water	Collections (Storm and Sewer)	City of Bishopville Wastewater
	Distribution	Cassatt Water Company
		City of Bishopville Water

Source: (2021). *Bishopville Truck Route Project Early Utility Coordination Summary*.

4.11.3 How would the alternatives impact utilities?

All of the build alternatives would impact existing utilities to some degree. The project would require communication (cable/fiber optics and telephone), electric, natural gas, sewer, and water relocations and construction. Potential utility impacts by alternative are provided in **Table 4.11-2**.

[26] *South Carolina 811 website*. Retrieved April 2020 from https://www.sc811.com/about.

Table 4.11-2. Potential Existing Utility Impacts by Alternative

Utility Provider	Alternative												
	No-Build	1	2	3	4	5	6 (PA)	7	8	9	10	11	12
City of Bishopville Water	0	3	3	3	4	3	3	3	3	3	3	4	4
City of Bishopville Wastewater	0	2	2	2	3	2	2	2	2	2	2	3	3
Cassatt Water Company	0	2	3	3	3	3	3	2	3	2	3	2	3
Dominion Energy	0	3	5	3	4	5	4	3	4	2	4	3	5
Duke Energy (Distribution)	0	7	8	8	8	8	8	7	8	9	8	9	8
Duke Energy (Transmission)	0	2	0	0	0	0	0	2	0	2	0	2	0
Charter Spectrum	0	7	8	8	8	8	8	7	8	9	8	9	8
Farmers' Telephone Cooperative	0	7	8	8	8	8	8	7	8	9	8	9	8
Frontier Communications	0	7	8	8	8	8	8	7	8	9	8	9	8
Systems & Solutions	0	1	1	1	1	1	1	1	1	1	1	1	1
Total	**0**	**41**	**46**	**44**	**47**	**46**	**45**	**41**	**45**	**48**	**45**	**51**	**48**

Source: (2020). *Bishopville Truck Route Project Early Utility Coordination Summary*
Note: Impacts for all build alternatives were estimated based on the proposed footprint plus a 25-foot buffer.

4.11.3.1 No-Build Alternative

There would be no impacts on existing utilities with the No-Build Alternative.

4.11.3.2 Build Alternatives

All 12 build alternatives would result in utility impacts. As seen in **Table 4.11-2**, Alternative 11 is estimated to have the greatest impact with 51 potential utility impacts. Alternatives 1 and 7 are estimated to have the least impact with 41 potential utility impacts each. Alternative 6 (Preferred Alternative) is estimated to have 45 potential utility impacts. Duke Energy (Transmission) is the only utility provider that would not be affected by the construction of this alternative.

4.11.4 How would utility impacts be mitigated?

SCDOT will coordinate with appropriate utility owners during final design for all utility conflicts, including means to avoid or minimize impacts. Coordination efforts will prevent damage to existing utility systems and minimize disruption and degradation of utility services to local customers. Where utility impacts cannot be avoided, SCDOT will coordinate with utility owners and operators to identify construction requirements and financial responsibility for relocations based upon easements, license agreements, ownership, or other existing agreements covering the use of affected utilities.

4.12 Construction

This section summarizes the anticipated construction impacts of the proposed Bishopville Truck Route project and the mitigation methods that would be applied for those impacts. As the No-Build Alternative would not include any construction activities or related impacts due to construction, it is excluded from this section. Since the build alternatives would all have similar construction impacts, the following discussion of impacts is common to all build alternatives unless otherwise noted.

Methods of Project Delivery

Design-Bid-Build is the traditional delivery method SCDOT has used to deliver projects. SCDOT performs design, develops all construction plans and documents, and serves as the engineer-of-record. Once design is complete, a single contract is awarded to provide construction services. *Design-Build* is an alternative project delivery method in which a single contract is awarded to provide design and construction services.

The construction phase of the project may cause adverse impacts on the environment, including temporary impacts on air quality, noise, and natural resources. These impacts are generally short-term in nature and will be mitigated through the use of best management practices (BMPs) and other standard SCDOT procedures.

The two most common methods of delivering projects are "Design-Bid-Build" and "Design-Build." Design-Bid-Build consists of three distinct phases: design phase, bid phase, and build phase. Design-Build replaces the designer and the contractor with a single party (the "design-builder") who fills both roles and serves as the single contact for the entire project.

4.12.1 What are the phases of construction?

The construction of roadway projects like the Bishopville Truck Route Project usually involves four distinct phases: final design, pre-construction, construction, and post-construction regardless of how the project is delivered.

4.12.1.1 Final Design

If a build alternative is selected and the Final Environmental Impact Statement (FEIS)/Record of Decision (ROD) is approved, a design team would complete the final design for the project. The preparation of the final design includes but is not limited to the following items: survey, geotechnical investigation, roadway design plans, erosion and sediment control plans, traffic control and traffic signal plans, utility relocation plans, environmental permitting, preparation of construction quantities, and estimated construction cost. Survey and engineering plans are developed, signed, and sealed by licensed professional surveyors and engineers based on federal, state, and local design standards, rules, and regulations.

4.12.1.2 Pre-Construction Activities

Pre-construction activities include developing/executing construction contracts with the project contractor, community outreach efforts, permit acquisition or agency approval, property acquisition, and utility relocation. Some of these pre-construction activities could begin following approval of the FEIS/ROD. Other activities may require partial or full completion of the final design.

4.12.1.3 Construction Activities

When the pre-construction activities have been completed, construction activities begin. These activities include but are not limited to clearing and grubbing, paving, grading, erosion control, landscaping, construction engineering and inspection (CEI), bridge and culvert construction, stormwater structures, traffic signals, and lighting.

Phases of Construction

- Final Design
- Pre-Construction
- Construction
- Post-Construction

4.12.1.4 Post-Construction Activities

Once the project has been constructed, post-construction activities begin. These activities include but are not limited to the removal of silt fencing and other erosion measures, removal of construction equipment, removal of barriers and construction signage, As-Built survey, contract closeout, and any required LOMR certifications.

4.12.2 What are the anticipated construction impacts?

4.12.2.1 Traffic, Railroads, and Bridges

Roadway users would be temporarily impacted during construction by traffic detours and temporary road closures that result from construction activities. Impacts could include rerouting traffic onto other roads, temporary closure of lanes or sections of roads, and temporary lane shifts. The changes in travel patterns during construction could adversely affect travel times, fuel use, air quality, and could result in the deterioration of pavement on roads that were not designed for the increased traffic volumes. During the construction phase, emergency service vehicles may experience increased response times. Access to residential and commercial areas may be temporarily disrupted, resulting in longer commute times and a potential loss of revenue for some businesses.

Modifications to existing railroad at-grade crossings and/or construction of new at-grade and bridged railroad crossings would occur along St. Charles Road (SC 154) and either just east of Dixon Drive or on McGuirt Road depending on the build alternative. The construction of all alternatives except Alternatives 1, 7, 9, and 11 would result in the closure of the existing at-grade railroad crossing on Dixon Drive due to the proximity of the nearby proposed crossing.

The existing culverted stream crossing conveying Unnamed Tributary #3 under Jordan Lane would be replaced for all alternatives and, for Alternatives 1, 7, 9, and 11, the existing bridge crossing on McGuirt Road over Robert E. Lee Branch would be replaced. All build alternatives propose between three and six new stream crossings; however, their construction should not affect existing traffic flow. For the construction of railroad crossings and culverted/bridged stream crossings, traffic would be redirected as applicable.

4.12.2.2 Easements and Utilities

Temporary construction easements may be needed for some properties but are only anticipated around tie-ins and intersections to existing roadways where there is existing ROW. SCDOT would temporarily use these properties during construction and would provide compensation to the landowner for the temporary use. The property would be fully returned to the owner when the use of the property is no longer required, typically when construction is complete. The proposed ROW will encompass the new alignment for the majority of the project length and its limits will be determined during the ROW appraisal and acquisition phase.

Construction activities could temporarily affect access to businesses in the construction area. Although the SCDOT would require the contractor to maintain access to properties to the extent practicable, temporary detours and temporary driveways could limit some access. This may discourage customers from patronizing businesses in construction areas.

Construction of all build alternatives would impact existing utilities. The project would require communication (cable/fiber optics, and telephone), electric, natural gas, sewer, and water relocations and construction.

4.12.2.3 Air Quality

Construction activities could include the staging of construction, delivery of equipment and materials, and longer waiting times at traffic signals. The temporary construction could have a short-term impact on air quality, primarily during site preparation. Potential air quality impacts could occur due to the dust and fumes from equipment, earthwork activities, and vehicles accessing the construction site. Anticipated impacts could include dust, particulates, and pollutant emissions from mobile and stationary construction equipment. Emissions would be generated from excavation, truck delivery/haul, on-site construction equipment, and mobile emissions from vehicles rerouted from road closures and reduced speed of vehicles slowed by construction activity. Temporary increases in construction-related emissions would only last for the duration of construction.

4.12.2.4 Noise

Temporary and localized construction noise impacts would likely occur as a result of major construction activities including earth removal, paving, grading, and hauling. Temporary speech interference for passers-by and individuals living and/or working near construction activities can be expected as a result of increased noise during construction. Pile drivers and impact-hammers will cause temporary, sporadic, and acute construction noise impacts. Other equipment, such as paving equipment, produces more steady noise levels and, if operated at night, may interfere with sleep. Sporadic noise emissions from backup alarms and liftgate closures will be perceived as distinctly louder than the steady noise levels of construction equipment and will likely cause impacts on residences. The sound levels resulting from construction activities will be a function of the types of equipment used and duration and proximity of construction activities.

4.12.2.5 Water Resources

During construction, loose soil may wash into receiving waters. This temporary silt may contain contaminants that could degrade the water quality of the stream and flow downstream to Laws Branch, Black River, Robert E. Lee Branch, Airport Run, and Unnamed Tributaries #1-#3. Sediments in the water would also increase erosion along stream banks as they are carried downstream, further impacting stream water quality.

The build alternatives all have the potential to impact existing wetlands and streams through proposed crossings of Laws Branch, Black River, Robert E. Lee Branch, and Unnamed Tributaries #1-#3. These proposed crossings would be most likely bridged for Laws Branch, Black River, and Robert E. Branch and culverted for Unnamed Tributaries #1-#3. Their installation can result in increased sediment runoff and onsite/offsite erosion if not properly designed and constructed.

4.12.2.6 Natural Resources

Due to a lack of suitable habitat and because no listed species were observed, no impacts on protected species or designated critical habitat are anticipated.

4.12.2.7 Cultural Resources

Construction activities could adversely affect the Thomas Fraser House property and/or viewshed.

4.12.2.8 Hazardous Materials

Properties potentially containing hazardous materials were identified within and adjacent to the project study area using ERS. Of the 52 identified potential contamination sites, five sites were determined to be of concern to the proposed project due to site proximity and/or the occurrence of past violations relating to hazardous materials. Additional field investigations may be required to characterize the extent of possible contamination from sites of concern before acquiring property.

4.12.3 How would construction impacts be mitigated?

4.12.3.1 Traffic, Railroads, and Bridges

To mitigate traffic impacts, the construction contractor will develop a traffic control plan to minimize interference to traffic flow from construction equipment and activities. This plan would require that access to businesses and residences be maintained, to the extent practicable, and that existing roads be kept open to traffic unless alternate routes are provided.

A comprehensive public information campaign would be implemented to inform the public about construction activities to reduce impacts. Construction schedule, work hours, potential detours, and impacts on traffic operations are examples of information that would be released to the public. Changeable message signs would be used on the construction site to notify motorists about construction activities, changes to traffic patterns, and night or weekend work.

The traffic control plan would contain measures for the construction of any proposed railroad level grade/bridge crossings and culverted/bridged stream crossing to mitigate impacts on the existing flow of traffic and avoid the disruption of rail service. This may require temporary lane closures/shifts or onsite/offsite traffic detours to safely construct these railroad and stream crossings. SCDOT will coordinate with the SCRF about proposed railroad crossings during final design.

4.12.3.2 Easements and Utilities

To mitigate impacts, any unavoidable construction easement placement adjacent to the existing ROW for the project would be minimized in the project design phase. SCDOT would provide compensation to the landowner for the temporary use of the landowner's property during construction. The property would be fully returned to the owner when the use of the property is no longer required, typically when construction is complete. Long-term impacts are not anticipated.

SCDOT will coordinate with utility owners during final design for utility conflicts, including means to avoid or minimize impacts. Where impacts cannot be avoided, SCDOT will coordinate with utility owners and operators to identify construction requirements and financial responsibility for relocations based upon easements, license agreements, ownership, or other agreements. Advanced utility relocation would streamline construction and minimize delays, so it is anticipated that many utility relocations would occur before construction.

4.12.3.3 Air Quality

BMPs that limit localized construction-related dust generation are described in the SCDHEC *BMP Handbook* (2014) and would be used to mitigate air quality. These methods include vegetative cover, mulch, spray-on adhesive, calcium chloride applications, water sprinkling, stone, tillage, wind barriers, and construction of temporary graveled entrances/exits to the construction site. The contractor will ensure all construction equipment is properly tuned and maintained and will minimize idling time to save fuel and reduce emissions.

In accordance with Section 107.07 of the SCDOT *Standard Specifications for Highway Construction* (2007), the contractor would comply with all South Carolina Air Pollution Control Laws, Regulations, and Standards. The contractor would also comply with the county and other local air pollution regulations. Any burning of cleared materials would be conducted following applicable state and local laws, regulations, and ordinances, and the regulations of South Carolina's SIP for air quality, in compliance with *Regulation 62.2, Prohibition of Open Burning*.

4.12.3.4 Noise

To mitigate noise impacts from construction, low-cost and easily implemented construction noise control measures should be incorporated into the project plans and specifications to the extent possible. These measures include but are not limited to work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of "tailgate banging," ambient-sensitive backup alarms, noise complaint mechanisms, and consistent and transparent community communication. Construction noise would be subject to compliance with local noise regulations/ordinances. Powered construction equipment shall not be operated during the traditional evening and/or sleeping hours within 150 feet of a noise-sensitive site (e.g., residences, schools, preschools, daycares, places of worship, hospitals, retirement homes, parks, campgrounds, and apartment complex pools), to be decided either by local ordinances and/or agreement with the SCDOT. The public would be notified and given the opportunity to provide comments before the use of powered construction equipment being operated adjacent to residential communities during the evening and/or sleeping hours.

4.12.3.5 Water Resources

To mitigate impacts on water resources, an erosion control plan would be developed and implemented before construction and would incorporate measures to control non-point source impacts of construction pollution. Potential borrow areas to be used for project fill will be field reviewed and assessed for the presence of any jurisdictional features, and BMPs will be applied before land disturbance to avoid and/or minimize erosion and control sediment runoff.

The contractor would avoid and minimize impacts resulting from stormwater runoff through the implementation of construction BMPs reflecting policies in 23 CFR 650B and *SC Code of Regulations 72-400*. The SCDOT has also issued an Engineering Directive Memorandum (Number 23), dated April 10, 2015, regarding Department procedures to be followed to ensure compliance with *SC Code of Regulations 72-400, Standards for Stormwater Management and Sediment Reduction*. Exposed areas may be stabilized by following the SCDOT *Supplemental Technical Specification for Seeding* [SCDOT Designation SC-M-810-4 (07-17)]. The SCDOT *Standard Specifications for Highway Construction* (2007) would be followed during design and construction to minimize runoff pollution to streams.

Due to the existing water quality impairment associated with Robert E. Lee Branch in the project watershed, SCDHEC may require additional water quality protection and stormwater treatment measures during and after construction. Specific mitigation requirements for water quality impacts would be determined during the Section 401/402 permitting process.

Executive Order (EO) 11990: Protection of Wetlands requires federally supported projects to preserve wetlands and to avoid and minimize wetland impacts to the maximum extent practicable. Mitigation has been defined in the *National Environmental Policy Act (NEPA)* regulations to include efforts which: a) avoid; b) minimize; c) rectify; d) reduce or eliminate; or e) compensate for adverse impacts on the environment [40 CFR 1508.20 (a-e)]. *Section 404(b) (1) Guidelines of the CWA* and *EO 11990* stress avoidance and minimization as primary considerations for the protection of wetlands. The SCDOT would comply with *EO 11990* regarding the protection of wetlands. The wetland impacts required for construction of the Preferred Alternative would be quantified applied to the determination of required compensatory mitigation per the latest USACE Mitigation guidance.

Due to the probable impacts of the project on wetlands and WOTUS, a Section 404 permit from the USACE would be required for the placement of dredged or fill materials in WOTUS including jurisdictional wetlands. Additionally, a Section 401 Water Quality Certification (WQC) permit for discharges into wetlands and WOTUS would be required from SCDHEC. This certification ensures that discharges are in accordance with state water quality standards. SCDOT would be responsible for obtaining this certification as part of the Joint 404/401 permit process.

A NPDES permit in compliance with Section 402 of the *CWA* would also have to be obtained for construction. The contractor would be responsible for developing a project-specific *Stormwater Pollution Prevention Plan (SWPPP)* as part of the Section 402 permit. All permits would be obtained following guidelines detailed in the SCDOT *Stormwater Quality Design Manual* (2014) and in compliance with the South Carolina *Stormwater Management and Sediment Reduction Act* (1991). See **Section 4.15** for more information on permits required for the Bishopville Truck Route Project.

4.12.3.6 Natural Resources/Threatened and Endangered Species

Impacts on natural habitat communities would be minimized to the extent necessary to construct the project. To mitigate natural forested habitat loss, the SCDOT would consider planting native trees in the ROW adjacent to new or improved roadways outside of required clear safety zones.

Should any endangered or threatened species be observed during construction of the project, construction activities in the area of observance would cease immediately and the USFWS would be notified. Should any additional species be listed as federally endangered or threatened before the start of project construction, consultations would be conducted with the USFWS, as appropriate.

The SCDOT will comply with the *Migratory Bird Treaty Act of 1918* (*MBTA*) to prevent the unlawful taking or killing of migratory birds and the unauthorized destruction of their active nests. If an active migratory bird nest is discovered at any time, the contractor will cease work immediately on the structure and notify the RCE. The RCE will notify the Environmental Services Office (ESO) Compliance Division to determine the next course of action. The contractor shall not take/kill a migratory bird or remove/disturb an active migratory bird nest

4.12.3.7 Cultural Resources

To mitigate impacts on the Thomas Fraser House property, care will be taken to minimize construction traffic and noise around these areas. During construction, the contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations. If any such remains are encountered, the RCE and SCDOT's Construction Manager would be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise. If previously unknown tribal artifacts, items of cultural significance, and/or human remains are discovered during construction, the resources will be handled according to 36 CFR 800.11 in coordination with the SHPO and appropriate Tribal Historic Preservation Office.

4.12.3.8 Hazardous Materials

Hazardous materials should be managed and disposed of properly to an appropriately permitted facility to minimize impacts during the cleanup process. Activities may be monitored by a professional that is certified in the removal, handling, and disposal of lead-based paint and/or asbestos-containing materials. In dealing with hazardous materials and hazardous waste sites, several plans would be developed to protect human health and the environment. These plans include a hazardous waste management plan, an on-site health and safety plan, and a SPCC plan.

Any previously unidentified contaminations would be evaluated and addressed according to SCDHEC and EPA requirements. If hazardous spills are found, SCDHEC will be informed and measures will be set forth to avoid and reduce environmental impacts.

4.13 Indirect and Cumulative Effects

4.13.1 What are indirect and cumulative effects[27]?

The Council on Environmental Quality (CEQ) regulations define indirect and cumulative effects (ICE).[28] Direct effects are caused by the action and occur at the same time and place. Potential direct effects from the proposed project were discussed in previous sections. Indirect effects are caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in land use patterns, population density or growth rate, economic vitality, and related effects on air, water, and other natural systems. Indirect impacts associated with a project can be difficult to predict and define.

Indirect and Cumulative Effects

Indirect effects are caused by an action and are later in time or farther removed (off site) in distance but are still reasonably foreseeable.

Cumulative effects are effects that result from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions.

Several guidance documents discuss two common types of indirect effects: growth-inducing effects and encroachment. Growth-inducing effects are changes in the location, magnitude, or pace of future development resulting from changes in accessibility caused by a project. An example of an induced-growth effect is commercial development around a new interchange/intersection and the impacts associated with this development. Encroachment-alteration effects are physical, chemical, or biological changes in the environment that occur because of a project but are removed in time or distance from direct effects. An example of an encroachment effect is a long-term decline in the viability of a certain species due to habitat fragmentation resulting from a project.

Cumulative effects are the effects on the environment that results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or individual undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.

4.13.2 How were indirect and cumulative effects evaluated?

There are numerous recognized guidance and policy documents by states, FHWA, and others. Because indirect and cumulative effects can be difficult to predict, per CEQ direction, the analysis results are those considered “likely” or “probable” as a result of the proposed project. The American Association of State Highway Transportation Officials (AASHTO) *Practitioner’s Handbook - Assessing Indirect Effects and Cumulative Impacts Under NEPA* (2016) and the *National Cooperative Highway Research Program (NCHRP) Report 466, Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (2002) provided a framework for conducting the analyses documented in this section.

---

[27] The Notice of Intent for this project predates the 2020 updates to the Council on Environmental Quality regulations that went into effect on September 14, 2020. Therefore, language primarily related to direct, indirect, and cumulative impacts remains within certain sections of the document."

[28] FHWA. (n.d.). *FHWA Environmental Review Toolkit*. Retrieved from https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx#:~:text=3.,of%20%22reasonably%20foreseeable%22%20actions.&text=The%20determination%20or%20estimation%20of,indirect%20and%20cumulative%20impact%20analysis.

The evaluation process included defining a study area subject to the proposed project's influence. Because both indirect effects and cumulative impacts occur beyond the immediate footprint of the project, the effects were examined for the overall project study area. The study area generally represents the geographic boundary that could experience an increase in development with improved accessibility from the proposed project, the area where increased development could occur, and the areas of potential notable resource impacts associated with development.

The most current long-range transportation plan, *Forward 2045: Santee-Lynches Regional LRTP* (2019), is the planning horizon used to assess the indirect and cumulative impacts of this project. A planning horizon of 2045 is generally consistent with other planning documents for the study area.

For indirect effects to occur, other factors may be necessary to influence future conditions resulting from the proposed project, including suitable, available land for development or redevelopment; economic conditions that support development (e.g., markets); zoning and other land use controls and policies suitable for the type of development suggested by market conditions; and other infrastructure that supports development (e.g., water and sewer service).

Indirect effects analysis includes an assessment of the project's potential to change future land uses and the foreseeable impacts of those changes. The steps in assessing the overall potential for indirect effects included an evaluation and ranking (low, medium, and high) several indicators.

The assessment of these indicators provides a general gauge of the possible type, location, and timing of project-induced development from the project.

Potential for Increased Mobility/Accessibility: Medium

The proposed truck route is a substantial investment of a facility in a new location. The truck route is intended to serve as a major north-south route accommodating truck traffic in the Bishopville area. Its primary purpose is to route heavy truck traffic around the primary business district of Bishopville.

The potential for travel time savings (e.g., shorter, faster trips) and increased accessibility is a key factor of a project's potential to induce growth. As a new location facility, the proposed truck route would reduce travel times and provide access to undeveloped land in the area outside of the Bishopville center district. Enhanced accessibility could encourage new or higher intensity development at intersections with the proposed truck route, particularly for alternatives with new connections (full intersections) with Bethune Highway (SC 341) and Browntown Road.

The proposed truck route would provide access to currently undeveloped land and create new intersections. Commercial convenience (e.g., gas stations, fast-food restaurants, and shopping centers) occurs at intersections where greater traffic can support such businesses. Changes in land use could occur from rural and low-density residential to higher intensity residential and commercial uses at specific intersections. However, traffic volumes are not expected to increase substantially since Bishopville is not located in or near a major metropolitan area.

Factors other than increases in mobility and accessibility can limit the potential for induced growth. Constraints on growth include lack of demand, lack of available land, lack of water and sewer infrastructure, land use controls, regulatory constraints, and public opposition to development. These factors described below play a key role in a project's potential to cause induced growth.

The potential for increased mobility/accessibility is ranked **Medium** because the proposed truck route would provide access to undeveloped land and improve travel times.

Growth Trends and Projections: Low

An understanding of growth trends that would occur without the project was used as a basis for assessing the potential for induced growth. Data for population and employment, housing construction, commercial and industrial development, and conversion of undeveloped land are some factors in describing growth trends for the project study area. Sources for the assessment included:

- Bishopville Comprehensive Plan (2011)
- Bishopville Truck Route Project Economic Development Report (2021)
- Forward 2045: Santee-Lynches Regional LRTP (2019)
- *Lee County Comprehensive Plan* (2011; Updated 2020)
- Santee-Lynches 2017-2022 CEDS (2017)
- SCDEW's Community Profile - Lee County (2020)

There are inconsistencies among local and transportation plans and limited data regarding predicted growth for Lee County and Bishopville. According to the recent plans, both Bishopville and Lee County experienced a decline in the population of about 7% between 2000 and 2017. According to the most recent (updated) Comprehensive Plan for Lee County, the county is projected to experience a percentage decrease in population of about 15% between 2020 and 2030. However, the *SCDEW's Community Profile - Lee County* (2020) states that Lee County will see an increase of about 4% in population in the next decade.

According to *Forward 2045: Santee-Lynches Regional LRTP* (2019), the pace of growth in the Santee-Lynches region is expected to be slow over the next 25 years. A review of the projected growth traffic analysis zone (TAZ) through 2045 indicated that the region overall could experience marginal growth or population decline. For TAZs in the project study area north of I-20, population growth over the next 25 years (by 2045) will not exceed 200 persons.

Local planning staff was contacted to assist in evaluating the potential to indirectly affect land use and induce growth/development potential to 1) identify any development projects in the early stages of planning or construction in the project study area, 2) determine if any of the development projects are being planned in anticipation of the proposed truck route, and 3) determine if there are any plans to expand water and sewer services in the project study area. SLRCOG and City of Bishopville staff indicated that there are no projects proposed in the areas designated for the proposed truck route at this time.

Given the uncertainty surrounding the area's growth rate and lack of planned development projects, growth trends and projections is ranked **Low**.

Available Land: High

The study area is predominately rural, with more than half the area zoned as Agricultural/Rural. Following agricultural land, single-family residential has the second largest percentage of land use in the study area. The majority of single-family residential is in the Bishopville municipal limits. Vacant land accounts for about 9% of the land use throughout the study area and is primarily on the outside of Bishopville's city center and adjacent to Lee State Park.

The two areas likely to experience growth and development are the DHD and the RD (**Figure 4.1-2**). The 9-acre RD is located downtown; none of the build alternatives are located in the RD. The 1,700-acre DHD—which consists of mostly farmland—is located between I-20 and the Bishopville city limits; all 12 build alternatives traverse the DHD. The project could create the right conditions for focused growth around the I-20 corridor, which is consistent with local economic development plans.

Lee County's Comprehensive Plan (2020) discusses maintaining agricultural resources and preserving agricultural farms within the county. The *Bishopville Comprehensive Plan* (2011) discusses Smart Growth, which includes preserving open space and farmland for future generations. The *Forward 2045: Santee-Lynches Regional LRTP* (2019) and *Santee-Lynches 2017-2022 CEDS* (2017) plans discuss the importance of agriculture on the region's economy and how capitalizing on the agricultural sector is beneficial for the region's economic future. Although potential impacts on farmland must be considered under federal (and state) laws, these rules apply to the Bishopville Truck Route Project, but not to private development. The project could indirectly cause conversions of prime farmland and farmland of statewide importance to non-agricultural uses.

Large areas of both vacant and agricultural land resulted in a ranking of **High** for available land.

Water and Sewer Availability: Medium-High

According to plans, the City of Bishopville extended both water and sewer lines outside of the city limits to encourage commercial and industrial development along US 15 and SC 341. Plans suggest that the county will continue to encourage and invest in expanding water systems to serve county residents and future industrial/commercial site development. The CEDS notes that there has been substantial investment in the region to upgrade/expand wastewater and water infrastructure.

Recent economic development initiatives in Bishopville and Lee County include upgrading water/sewer. Bishopville received a $750k Community Development Block Grant (CDBG) to complete the first of a three-phase $2.5 million wastewater trunk link upgrade to address infill and infiltration concerns. The DHD's proximity to I-20, combined with low-cost land and water/sewer supply, makes it a potentially attractive location for manufacturing and/or processing facilities.

According to the *Bishopville Comprehensive Plan* (2011), Bishopville's wastewater treatment plant has a design capacity of approximately 2.5 million gallons per day (MGD) but is processing at about half capacity, leaving plenty of capacity to accommodate additional development and usage.

Based on the availability of services for both the City of Bishopville and Lee County, water and sewer availability is ranked **Medium-High**.

Market for Development: Low-Medium

According to the *Bishopville Comprehensive Plan* (2011), the housing market has shifted to alternative lower-cost housing, and the area has seen an increase in mobile/manufactured homes. The plan also notes that a larger share of future housing stock will likely be other lower-cost housing with a goal of the city to promote private development and affordable housing.

Minimal housing development has occurred in recent years. Business and commercial development has remained centralized in Bishopville with some infill development on vacant lots and larger tracts/parcels. Previous plans note business/commercial development has remained centralized in Bishopville, with growing signs of disbursement along traffic arteries into the city, particularly US 15.

To help bolster the Bishopville economy, the SLRCOG has promoted various initiatives, including downtown revitalization, water/sewer improvements, workforce education/training, and industry recruitment. Initiatives include placing medians and treescapes downtown, adding parking, and grants for infrastructure expansions.

Although the area is not under growth pressure, there may be a market for development around the proposed truck route due to available land, available water, and new intersections with major arterials. Therefore, the market for development is ranked **Low-Medium**.

Public Policy: Medium

The *Zoning Ordinance for Lee County* (2011) and the *City of Bishopville Zoning Ordinance* (2011) are the main policies used to regulate development, including the location and use of land, the density of and distribution of population, creating districts, and establishing development standards. In addition, the ordinances ensure the adequate provision of transportation, water, sewage, schools, parks, and other public requirements in accordance with the comprehensive plans.

As the city is not located in or in proximity to a metropolitan area or urban fringe, there has been no pressure from suburban development in the project study area. As such, zoning and land use plans are not routinely modified to evolve or conform to development pressures. Restrictions could be modified if the project were constructed.

The creation of economic development plans and local investment suggests that there is local support for development.

Public policy is ranked **Medium** as a result of the City and County policies and regulations to regulate development through zoning and ordinances.

Notable Environmental Features: Medium-High

The project study area contains several notable environmental features. As shown in **Figure 4.13-1**, wetlands are scattered throughout the study area with larger wetland systems located in the area around I-20 and along the eastern border of the study area in Lee State Park. All wetlands located in the study area are considered Category 4 as a result of human disturbances.

There are both perennial and intermittent streams located in the project study area. The Robert E. Lee Branch of the Lynches River is located east of the alternatives and is listed on Section 303(d) impaired waters list. Natural habitats are located near stream and wetland areas, but most natural habitats in the study area have been manipulated by past land management practices to facilitate improved drainage for agricultural uses. Streams were partially or fully channelized, which has eliminated or reduced the number of adjacent wetland areas.

Land use and land cover in the project study area are predominately agricultural. As shown in **Figure 4.2-1a-1d**, certain soils in the project study area are classified as high quality for farmland. As seen in **Figure 4.13-1**, there is an abundance of active agricultural parcels located between I-20 and the Bishopville municipality and northwest of the Bishopville municipality.

All historically significant resources are clustered in the downtown area.

Because of the relative abundance of natural environmental features and farmland, this category is ranked **Medium-High**.

4.13.3 What are the impacts associated with not building the project?

The No-Build Alternative assumes that the proposed project would not be built and is the baseline for analyzing the project's build alternatives. The No-Build Alternative would not result in changes to existing resources, as no induced growth would be expected a result of not building the project. As such, there are no anticipated resource effects related to induced growth with the No-Build Alternative. However, the No-Build Alternative would not meet the project purpose, which is to address truck traffic downtown and enhance the potential for economic vitality, resulting in the following adverse effects through 2045:

- Increased congestion and continued increase in truck traffic downtown, resulting in adverse effects on businesses and residents in the study area.
- Hinders facilitation of local economic redevelopment decisions and initiatives for the Redevelopment District in downtown Bishopville.
- Hinders facilitation of future local development decisions and initiatives that are consistent with local economic plans for the Development Holding District.

4.13.4 What are the potential indirect effects of the project?

The project study area is not poised to experience considerable growth by 2045. There are no reasonably foreseeable large development projects, including private commercial and industrial development through 2045 for the No-Build Alternative.

The indirect effects assessment for the proposed project was evaluated at a qualitative level. The assessment results in the conclusion that each of the 12 Alternatives would have indirect effects of similar magnitudes, with the type, timing, and location of induced growth varying marginally. For this reason, indirect effects are not a major factor in recommending the Preferred Alternative.

Although the study area is not expected to experience appreciable growth by 2045, future growth in the study area is focused on the DHD area in the vicinity of I-20. If constructed, the project could improve accessibility and the economic development potential for the DHD (north of I-20 between US 15 and SC 341). Induced growth and/or changes in land use are most likely to occur around proposed intersections—especially intersections with project termini—and within the DHD.

The project is somewhat likely to influence the intensity of development activity at major intersections with US 15 and new intersections within the proposed district, which could experience zoning changes to accommodate convenience type land uses such as those associated with the trucking industry. Improved connectivity around Bishopville could increase the demand for Bishopville support services (e.g., interstate truck stops, restaurants) and provide a seed for other subsequent industry and/or distribution facilities.

It is unlikely that the project would induce substantial growth outside of these focused areas. The Lynches River and the wastewater treatment facility essentially act as physical barriers to growth in the northeast portion of the study area. It is also unlikely that the project would induce substantial growth in the northwest portion of the study area because the project would not improve accessibility and the area lacks proximity and connectivity to I-20. New residential development is not anticipated around the landfill, wastewater treatment plant, or Lee Correctional Institution.

Potential induced growth and development patterns in the DHD could result in encroachment-alteration effects such as additional wetland, stream, and habitat conversions. Farmland, both active and prime land for agricultural uses, has the highest potential for encroachment-alteration effects due to its relative abundance in the DHD. Overall, the timing of development activities in the vicinity is somewhat dependent on construction of the proposed project, but more so on market conditions.

4.13.5 What are the potential cumulative effects of the project?

Several sensitive resources were identified for the cumulative impact analysis. The types of environmental resources present in the area include streams, wetlands, cultural resources, floodplains, and farmland. The most prevalent and sensitive resource in the study area is farmland, which has the potential to be threatened by the project and other future activities.

There are essentially no extensive past or future infrastructure projects in the area that have the potential to appreciably influence development in the study area. One ongoing project consists of improvements to I-20 and is scheduled to be completed in summer 2020. Improvements include rehabilitation and resurfacing improvements I-20, including two bridge deck replacements over US 15 in Bishopville, and repaving and roadway improvements. Local planning staff said there are no major reasonably foreseeable future actions, including federal and non-federal, planned transportation projects, or residential and commercial development.

Lee County has experienced a decline in the number of farms during the decade, as well as the average size of farms. The project could encourage this trend of agricultural decline for the county overall. Conversely, the proposed project could improve agricultural sector efficiency, connectivity, and transport within the project study area and Lee County. The presence of farmland in the project study area has impaired other sensitive resources (e.g., wetlands and streams) over time. Conversion of agricultural land to non-agricultural uses would result in incremental impairment of streams and wetlands through the year 2045.

An alternative roadway around Bishopville is one of several economic development initiatives for the city, county, and region. Previous and future initiatives to boost economic activity in Bishopville, combined with the proposed truck route, could influence growth and development potential in the area. The cumulative effects of economic development initiatives could include facilitating development/redevelopment opportunities and continued support for downtown revitalization.

Proximity to I-20 could create infill growth and development in the project study area. The proximity to the interstate could result in land use conversions consistent with those uses (e.g., industrial) projected for the holding district and are anticipated to be incremental over time and driven by economic and real estate market conditions. As a result, any of the build alternatives could affect water quality through the direct loss of streams and wetlands.

In addition, potential temporary indirect impacts during construction could include increased sedimentation and turbidity from in-stream work and possible spills or non-point source pollutants entering groundwater or surface water from storm runoff. Incremental increases of impervious surfaces for the build alternatives are expected, which would result in an incremental increase of sediments and roadway contaminants to streams/wetlands.

The proposed project has a low-moderate potential for indirect and cumulative effects because it would not create a new transportation link and substantially reduce travel times in a high-growth area, may not change overall travel patterns for non-truckers, or expose properties to substantially greater traffic volumes. Forecasted growth in the area with the No-Build Alternative is not significant and is not likely to result in the conversion of large amounts of farmland into urban development.

4.13.6 How could environmental justice populations be indirectly affected?

There may be some indirect effects of the proposed project in the project study area. The proposed project would result in mobility and accessibility benefits to most residents in the project study area, including workers in EJ communities. There are no anticipated adverse indirect or cumulative effects on EJ populations resulting from the proposed project.

4.13.7 How will indirect and cumulative effects be mitigated?

The development and/or redevelopment that could occur as a result of the proposed project, or independent of the proposed project, would be subject to land use plans, zoning regulations, and regulatory mechanisms in place to prevent and reduce cumulative impacts on resources in the respective study areas. These regulations and regulatory mechanisms would limit the potential cumulative effects of the proposed project on these resources.

For example, if new development were proposed that would impact jurisdictional WOTUS, a Section 404 permit would be required from the USACE. In addition to regulatory mechanisms, other mitigation measures would be applied as a result of impacts of the proposed project that would not only mitigate the direct impacts but would also mitigate the proposed project's cumulative effect on resources when added to past, present, and reasonably foreseeable future actions.

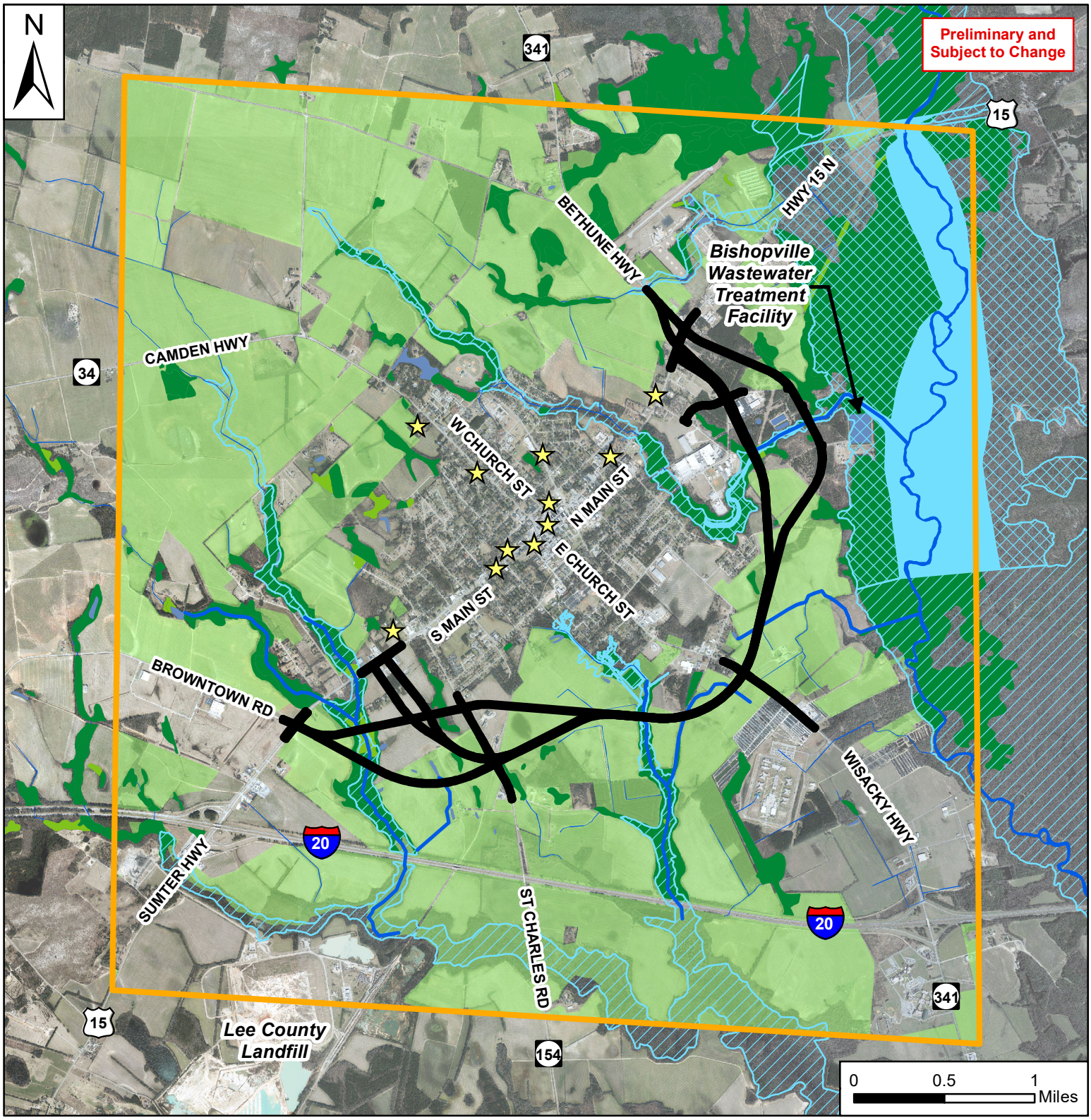
For example, SCDOT would mitigate stormwater runoff by discharging stormwater into detention basins and/or vegetated swales before it is released into receiving waters. This practice would reduce cumulative water quality impacts on streams by reducing peak-flow discharge and by allowing particulates and sediment in stormwater to settle in the basin to reduce the number of pollutants discharged to the receiving water. SCDOT and FHWA's best management practices guidelines would also be followed during design and construction to minimize the amount of runoff pollution from streams to reduce both the direct impact and the cumulative impact of runoff pollution.

Growth management and development restrictions are typically addressed by cities and counties through land use regulations such as zoning and other regulations, which are usually based on comprehensive or area master plans. Local governments are responsible for mitigating the impacts of growth and private development with jurisdictions. Potential strategies to mitigate growth and development impacts on the environment include local zoning and comprehensive planning revisions/updates, including revisions conditional upon natural resource preservation or open space or other recreational requirements, growth management regulations, land acquisitions and conservation easements, incentives for infill development, transfer of development rights.

SCDOT
South Carolina Department of Transportation

Bishopville Truck Route

U.S. Department of Transportation
Federal Highway Administration



- Cultural Facility
- Rivers and Streams
- Agricultural/Rural Parcels
- Alternatives
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Floodway
- Zone A Floodplain
- Zone AE Floodplain
- Study Area

Bishopville Truck Route Project Draft Environmental Impact Statement

March 2022

Notable Features

Figure 4.13-1

4.14 Other Impact Considerations

4.14.1 What about the irretrievable and irreversible loss of resources?

Implementing any of the build alternatives would involve a commitment of a range of natural, physical, human, and fiscal resources. Land used for the construction of the proposed project is considered an irreversible commitment during the time that the land is used for a highway facility. However, if a greater need for the use of land arises, or if the transportation system is no longer needed, the land could be converted to another use. At present, there is no reason to believe that such a conversion will be necessary or desirable.

Other Considerations

Implementing any of the proposed build alternatives would involve a commitment of a range of natural, physical, human, and fiscal resources.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material would be expended for project construction. Additionally, large amounts of labor and natural resources would be necessary for fabricating and preparing construction materials. These materials are generally not retrievable. However, they are not in short supply, and their use would not have an adverse effect on the continued availability of these resources.

Any construction also would require a substantial one-time expenditure of both state and federal funds, which are not retrievable. The commitment of these resources is based on the premise that residents in the immediate area, the region, and the state would benefit from the improved quality of the transportation system. These benefits include improved mobility, connectivity, accessibility; and reduced travel times; and are anticipated to outweigh the commitment of resources.

4.14.2 Will long-term project benefits outweigh short-term impacts?

The most disruptive short-term project impacts would occur during property/ROW acquisition and construction. However, the short-term uses of human, physical, socioeconomic, cultural, and natural resources would contribute to the long-term productivity of the project study area.

The short-term local impacts and use of resources by the implementation of any of the build alternatives would be consistent with the maintenance and enhancement of long-term productivity. The proposed Bishopville Truck Route Project is consistent with local plans and would add a vital link to the regional long-range transportation system. It is anticipated that the proposed project would enhance long-term access and connectivity opportunities in Lee County, and would support local, regional, and statewide commitments to transportation improvement and economic vitality.

4.15 Permits

Federal and state permits and certifications would be required for construction activities related to the project. Agencies that would issue these permits are either cooperating or participating agencies and have been involved during the project development process. SCDOT is responsible for preparing and obtaining the necessary permits, as outlined in the SCDOT *Stormwater Quality Design Manual* (2014), which would be submitted based on the final design. This section discusses the potential permits needed for the construction of the Bishopville Truck Route Project.

4.15.1 What is *Section 404 of the Clean Water Act*?

The *Clean Water Act* (*CWA)* establishes the basic structure for regulating pollutant discharge into waters of the United States (WOTUS) and quality standards for surface waters. Laws and regulations are placed under the authority of the United States Environmental Protection Agency (EPA) and the United States Corps of Engineers (USACE), in coordination with state governments. *Section 404(b)(1) of the Clean Water Act (CWA) of 1972,* as amended, prohibits the discharge of dredged or fill materials into WOTUS, except when authorized by a permit issued by the USACE. Depending on the type and extent of impacts, Section 404 permitting requirements can range from activities that are considered exempt or preauthorized to those requiring pre-construction notification for a Nationwide Permit (NP) or an Individual Permit (IP) from the USACE. Based on the anticipated impacts and the nature of the project, an IP will be required.

Section 404 Permit

A permit from the USACE is required for impacts on WOTUS, pursuant to *Section 404 of the CWA*. Section 404 is administered by the USACE and regulates the discharge of dredged or fill material into WOTUS.

The EPA in conjunction with the USACE, developed "Guidelines" to ensure compliance with *Section 404 of the CWA* when evaluating permit applications, and are included in EPA's regulations at 40 CFR Part 230. The *404(b)1 Guidelines* specifically outline four conditions that must be satisfied to determine that a proposed discharge complies with the guidelines. These conditions are referred to as "restrictions on discharge," and each has specific requirements to determine compliance. In general, these "restrictions" do not allow USACE to issue a permit if a discharge would:

1. have a "practicable"[29] alternative that would have a less adverse impact on the aquatic ecosystem if the alternative does not have other significant adverse environmental consequences. The USACE may only issue a permit for the "Least Environmentally Damaging Practicable Alternative (LEDPA)." Practicability considers cost, existing technology, and logistics of the alternatives. The "overall" project purpose is used to determine whether "practicable" alternatives exist;
2. cause or contribute to violations of any applicable State water quality standard; violate toxic effluent standards; jeopardize the continued existence of an endangered or threatened species; or violate any marine sanctuary;
3. cause or contribute to significant degradation of the waters of the United States;
4. not have taken appropriate and practicable steps to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

[29] An alternative is "practicable" if it is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes" (40 CFR 230.3(q)).

Since the four requirements above must be satisfied for a Section 404(b)(1) permit to be issued, they must be considered when identifying a preferred alternative. SCDOT carefully considered many factors, including the Section 404(b)(1) permit requirements, before recommending Alternative 6 as the Preferred Alternative. In addition to the purpose and need, several criteria were used to identify a preferred alternative. The potential impacts on WOTUS were considered along with the potential impacts on other resources. This detailed analysis—which balanced the adverse and beneficial effects of the project on the human, natural, and physical environment—should support the USACE Section 404(b)(1) permit decision. For more information on how the *Section 404(b)(1) Guidelines* were used in the alternative-screening process, see **Section 3.6.2**.

Section 404(b) (1) Guidelines of the CWA and *Executive Order (EO) 11990: Protection of Wetlands* stress avoidance and minimization as primary considerations for the protection of wetlands. *EO 11990* requires federally supported projects to preserve wetlands and to avoid and minimize wetland impacts to the maximum extent practicable. Mitigation has been defined in the *National Environmental Policy Act (NEPA)* regulations to include efforts which: a) avoid; b) minimize; c) rectify; d) reduce or eliminate; or e) compensate for adverse impacts on the environment (40 CFR 1508.20 [a-e]). SCDOT would comply with *EO 11990* regarding the protection of wetlands. Wetland impacts required for construction of the project would be quantified and applied to the determination of required compensatory mitigation USACE Mitigation Standard Operating Procedures.

4.15.2 What is *Section 401 of the Clean Water Act*?

Section 401 of the CWA requires that an applicant requesting a federal permit for activities that would impact WOTUS (Section 404 Permit) must also obtain a Water Quality Certification (WQC). This certification involves a review of the proposed project and an analysis of its potential effects on water quality. In South Carolina, the SCDHEC Water Quality Division is responsible for granting, denying, or waiving Section 401 WQCs. Since this project would require a Section 404 permit, a Section 401 WQC would also be required. A Section 401 WQC is required before the USACE will take action on the Section 404 permit. Mitigation for potential water quality impacts would include measures to reduce sediment and stormwater runoff.

4.15.3 What is *Section 402 of the Clean Water Act*?

Section 402 of the CWA authorizes the EPA to regulate point sources that discharge pollutants, including surface runoff, into WOTUS through the NPDES permit program. The EPA has delegated this authority to the SCDHEC Bureau of Water for projects located in South Carolina.

Construction of the project would require two different NPDES permits. One would be the NPDES GP for Stormwater Discharges from SCDOT Construction Activities, which regulates stormwater runoff during and post-construction. This permit is required for all SCDOT construction projects that disturb one or more acres of land and complies with the South Carolina *Stormwater Management and Sediment Reduction Act* (1991). Fulfillment of this permit requires a sediment and erosion control plan and a SWPPP that outlines appropriate BMPs. The other would be an NPDES Municipal Separate Storm Sewer System (MS4) permit which allows post-construction stormwater discharge to all receiving waters of South Carolina.

The City of Bishopville Wastewater Treatment Plant, located on McGuirt Road, has an existing NPDES General Permit for Domestic Wastewater Treatment Plant Dischargers that allows for discharge into the Robert E. Lee Branch.

5 PUBLIC AND AGENCY INVOLVEMENT

The *National Environmental Policy Act* (*NEPA*) and other federal laws require that agencies provide meaningful opportunities for involvement during the decision-making process. As the lead federal agency, the Federal Highway Administration (FHWA), is responsible for scoping, inviting cooperating agencies, developing consensus among stakeholders, resolving conflict, and ensuring that quality transportation decisions are fully explained. This chapter describes how the public and agencies have been involved in the project and summarizes the project's public involvement and agency coordination activities since the project was initiated in 2010, focusing on those conducted since 2015 when FHWA directed the South Carolina Department of Transportation (SCDOT) to prepare an Environmental Impact Statement (EIS) for the project. **Exhibit 5-1** depicts a timeline of key public and agency involvement activities and milestones. For more information, public involvement materials can be found in **Appendix C**, and agency correspondence and materials can be found in **Appendix D.**

NEPA and FHWA

As the lead federal agency in the *NEPA* process, FHWA is required to balance transportation needs, costs, resources, safety, and public input to make objective and responsible decisions.

5.1 Public and Agency Involvement Overview

Scoping is "a process that continues throughout the planning and early stages of preparation of an EIS." For an EIS, bureaus must use scoping to engage state, local and tribal governments, and the public in the early identification of concerns, potential impacts, relevant effects of past actions, and possible alternative actions. Scoping is an opportunity to introduce and explain the interdisciplinary approach and solicit information as to additional disciplines that should be included. Scoping also provides an opportunity to bring agencies and applicants together to lay the groundwork for setting time limits, expediting reviews where possible, integrating other environmental reviews, and identifying any major obstacles that could delay the process" (43 CFR Part 46).

To encourage early and continuous coordination, SCDOT, in cooperation with the Federal Highway Administration (FHWA), prepared an *Agency Coordination and Public Involvement Plan* in July 2018, which can be found in **Appendix C**. The plan identified strategies to create and maintain open lines of communication and coordination between SCDOT, Santee-Lynches Regional Council of Governments (SLRCOG), stakeholders, and the public.

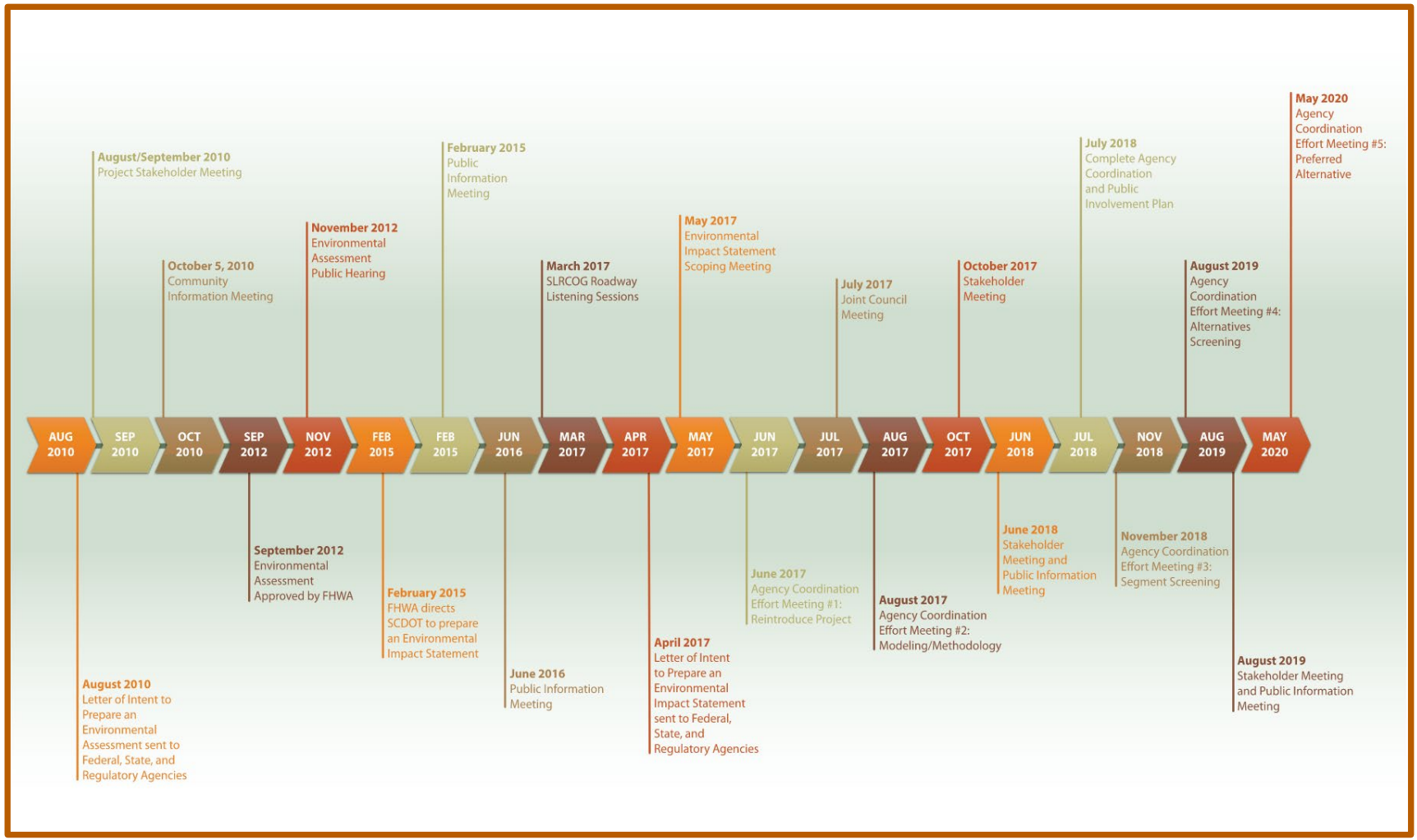
SCDOT and SLRCOG began coordination efforts with the community, local officials, and federal, state, and local agencies at the project's initiation in Summer 2010. Since then, public involvement and agency coordination efforts have helped define the project purpose and need and shape the alternative-development process. SCDOT will provide additional public involvement opportunities for potentially affected property owners and other interested stakeholders through project development to identify possible mitigation measures.

Scoping

Scoping is an important part of the environmental process used to solicit input from the public and agencies on the proposed action, alternatives being considered, and the possible impacts of a project.

All public comments received will be considered in the final project decisions and designs. All substantive comments are addressed before the approval of the combined Final Environmental Impact Statement/Record of Decision (FEIS/ROD) and by the lead federal agency, FHWA.

Exhibit 5-1. Public and Agency Involvement Timeline



5.2 Agency Coordination

Effective interagency coordination is the key to achieving environmentally responsible transportation decisions. The goal is to coordinate agency involvement under the *NEPA* process and to address concerns related to project delays, unnecessary duplication of effort, and added costs often associated with the conventional process for reviewing and approving transportation projects. Agency coordination activities have been summarized below, but more detailed information on agency coordination and correspondence can be found in **Appendix D**.

5.2.1 What is a notice of intent?

As required by *NEPA*, FHWA, in cooperation with the SCDOT, published a Notice of Intent (NOI) to prepare an EIS for the Bishopville Truck Route Project in the Federal Register on April 14, 2017 (**Exhibit 5-2**). The NOI includes information on the proposed project (or "action") and potential areas of concerns and impacts.

The NOI initiates scoping, which is a crucial part of the early planning process. Scoping refers to the interactive process of getting input and feedback on the project to identify the issues that are likely to be of the most importance. Agencies and the public are asked to provide comments on the proposed action, alternatives, issues, and the impacts that will be analyzed in the EIS.

5.2.2 What is a letter of intent?

As an integral part of the environmental process, SCDOT sent a Letter of Intent (LOI) notifying relevant agencies and individuals of the intent to prepare an EIS in accordance with *NEPA*. The LOI was distributed via email on April 25, 2017. The LOI described the proposed project; requested federal, state, and local input on the potential social, economic, and environmental impacts of the project; and provided information about a formal scoping meeting.

Table 5-1 lists the agencies and local officials that received a LOI. Public involvement materials can be found in **Appendix C** and agency correspondence can be found in **Appendix D**.

Exhibit 5-2. Notice of Intent

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Lee County, South Carolina; Notice of Intent

AGENCY: Federal Highway Administration, DOT.

ACTION: Notice of Intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an Environmental Impact Statement will be prepared for a proposed highway project in Lee County, South Carolina.

FOR FURTHER INFORMATION CONTACT: Emily O. Lawton, Division Administrator, Federal Highway Administration, Strom Thurmond Federal Building, 1835 Assembly Street, Suite 1270, Columbia, South Carolina 29201, Telephone: (803) 765–5411, Email: *emily.lawton@dot.gov.*

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the South Carolina Department of Transportation (SCDOT) and the Santee-Lynches Regional Council of Governments (SLRCOG), will prepare an Environmental Impact Statement (EIS) on a proposal to provide a truck route in the vicinity of the City of Bishopville in Lee County, South Carolina, from US 15 near I–20, southwest of the City, to the junction of US 15 and Bethune Highway (SC 341), northeast of the City. The project study area is generally defined by the area bordered by US 15/I–20 Interchange to the southwest, US 15 just north of Bethune Highway (SC 341) to the northeast, the intersection of Pinchum Sly Road (S–15) and Camden Highway (SC 34) to the northwest and the intersection of Wisacky Highway (SC 341) and Mac Stuckey Lane (local road) to the southeast.

US 15 (N. Main Street) through downtown Bishopville is currently a two-lane roadway with a raised median and on-street parking. On average, over 700 large commercial trucks travel through downtown daily. The purpose of the project is to address the existing and future truck traffic traveling through downtown Bishopville. The EIS for the proposed project will consider the No-build Alternative as well as build alternatives within the identified project study area that would meet the purpose and need of the project. The EIS will promote informed decision making in the development of a solution to address truck traffic through the downtown area. This EIS will also evaluate options which may enhance the economic development of the area.

The FHWA, SCDOT, and SLRCOG are seeking input as part of the scoping process to assist in identifying issues relative to this proposed project and potential solutions. Letters describing the proposed project and soliciting comments will be sent to appropriate Federal, State, and local agencies, and to private organizations and citizens who have previously expressed an interest in this proposal. Formal public scoping meetings will be held in Lee County. In addition, public information meetings will be held as the proposed project is developed, and a public hearing will be conducted after the approval of the draft EIS. Public notice will be given of the time and place of the meetings and hearing. The draft EIS will be available for public and agency review and comment prior to the public hearing.

To ensure that the full range of issues related to this proposed action is addressed and all significant issues are identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Dated: April 6, 2017.

Emily O. Lawton

Division Administrator, Columbia, South Carolina.

[FR Doc. 2017–07341 Filed 4–13–17; 8:45 am]

BILLING CODE 4910–22–P

Table 5-1. Letter of Intent Distribution

Federal Agencies	
US Army Corps of Engineers	US Environmental Protection Agency
US Coast Guard	US Fish and Wildlife Service
USDA - Natural Resources Conservation Services	US Housing and Urban Development
State Agencies	
SC Budget & Control Board	SC Secretary of Commerce
SC Department of Agriculture	SC Wildlife Federation
SC Department of Archaeology & Anthropology	SCDHEC - Bureau of Air Quality
SC Department of Archives and History	SCDHEC - Bureau of Environmental Health Services
SC Department of Natural Resources	SCDHEC - Bureau of Land & Waste Management
SC Department of Parks Recreation & Tourism	SCDHEC - Bureau of Water
SC Ecological Services Field Office	SCDHEC - UST Management Division
SC Forestry Commission	SCDHEC - Environmental Quality Control
SC Human Affairs Commission	SCDHEC - Water Quality Division
SC Natural Heritage Corridor	SCDNR Office of Environmental Programs
Tribal Organizations	
Eastern Band of Cherokee Indians	United Keetoowah Band of Cherokee
Elected Officials	
SC Senate District 29	Lee County Administrator
House District 50	Lee County Council
Mayor of Bishopville	Lee County Council
City Administrator	Mayor of Sumter
Appointed Officials	
SCDOT Commissioner, 5th District	SCDOT Commissioner, 6th District
Community and Other Agencies	
City Nursery Farm	Santee-Lynches Regional Council of Governments
Lee County School District	Sierra Club
National Wild Turkey Foundation	The Nature Conservancy

5.2.3 What are cooperating and participating agencies?

Section 6002 of the *Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU)*, as amended by Section 1304 of *Fixing America's Surface Transportation Act (FAST)*, requires lead agencies to identify and involve cooperating and participating agencies, develop coordination plans, and provide opportunities for the public and agencies to be involved in defining the purpose and need statement and determining the range of alternatives to be studied in the EIS. The lead agencies are also responsible for collaborating with cooperating and participating agencies to determine methodologies and levels of detail for analyzing alternatives. Lead agencies must also provide oversight concerning managing the *NEPA* process and resolving issues.

As lead federal agency, FHWA is responsible for inviting cooperating and participating agencies and for developing consensus among stakeholders with diverse interests to ensure decisions are fully documented in the environmental review process. The federal and state agencies, and the local governments invited to be cooperating and participating agencies, are listed in **Table 5-2**. Copies of the letters requesting agencies to be cooperating and participating agencies and the responses can be found in **Appendix D**.

> ***SAFETEA-LU***
>
> The *Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU)*, requires lead agencies to identify and involve cooperating and participating agencies.

On June 12, 2017, the FHWA sent a letter inviting agencies to become participating or cooperating agencies in the development of the EIS. The roles and responsibilities of cooperating and participating agencies are similar, but cooperating agencies have a higher degree of authority, responsibility, and involvement in the environmental review process. A distinguishing feature of a cooperating agency is that the Council on Environmental Quality (CEQ) regulations (40 CFR 1501.6) permit a cooperating agency to "assume on request of the lead agency responsible for developing information and preparing environmental analyses including portions of the EIS in which the cooperating agency has special expertise." Participating agencies are defined as those with an interest in the project and are responsible for identifying issues of concern regarding the project's potential environmental, social, or economic impacts. Nongovernmental organizations and private entities cannot serve as participating agencies but are an important part of public involvement. **Table 5-2** lists the agencies that received an invitation letter.

Table 5-2. Cooperating and Participating Agencies

Agency	Status
United States Army Corps of Engineers (USACE)	Cooperating
Santee-Lynches Regional Council of Governments (SLRCOG)	Participating
South Carolina Department of Archives and History (SCDAH)	Participating
South Carolina Department of Health and Environmental Control (SCDHEC)	Participating
South Carolina Department of Natural Resources (SCDNR)	Participating
United States Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS)	Participating
United States Environmental Protection Agency (EPA)	Participating
United States Fish and Wildlife Service (USFWS)	Participating

5.2.4 How else were agencies involved?

The SCDOT monthly Agency Coordination Effort (ACE) meetings provided project updates and coordination efforts with Cooperating and Participating Agencies. ACE meetings provided formal settings for Cooperating and Participating Agencies to discuss and provide feedback on:

- Response to NOI/Invitation to be a Cooperating and Participating Agency;
- Project study area definition;
- Schedule and potential delays/issues;
- Methodologies for environmental studies and analysis;
- Agency Coordination and Public Involvement Plan;
- Purpose and Need for the project; and
- Alternative-development and screening

The Bishopville Truck Route Project was discussed at five project ACE meetings since the Notice of Intent (NOI) to prepare an EIS was published in the Federal Register on April 14, 2017 (**Table 5-3**). ACE meeting materials can be found in **Appendix D**.

Table 5-3. Agency Coordination Effort Meetings

Date	Topic	Participating Agencies	Meeting Purpose
06/08/2017	Project Reintroduction	FHWA, SCDHEC, SCDNR, USACE, USFWS	• Reintroduce the project • Satisfy scoping requirements per *Section 6002 of SAFETEA-LU* • Initiate agency coordination and collaboration • Solicit comments and feedback
08/08/2017	Modeling and Methodologies	FHWA, SCDAH, SCDHEC, SCDNR, SHPO, USACE, EPA, USFWS	• Discuss methodology and approaches for environmental technical analysis • Discuss the potential permits required for the project
11/08/2018	Segment Screening	FHWA, SCDAH, SCDHEC, SCDNR, USACE, EPA	• Present and confirm the project purpose and need • Review the alternative-screening process
08/08/2019	Alternative Screening	FHWA, NOAA, SCDAH, SCDHEC, SCDNR, USACE, USFWS	• Present detailed study alternatives • Confirm which corridors should be eliminated and which should move forward based on analysis
05/14/2020	Preferred Alternative	EPA, USACE, SCDHEC, SCDNR	• Present alternative-screening factors and potential project impacts • Recommend and get input on a proposed preferred alternative

5.2.5 How were local officials and community leaders involved?

In June 2016, three outreach meetings were conducted with City and county elected officials and staff, civic and business leaders, and SLRCOG. The meetings were held to initiate collaborative discussions and encourage a partnership among community leaders, SCDOT, and SLRCOG during the *NEPA*/EIS process. Attendees suggested that the public outreach component helps the community understand the *NEPA* process and how input will be used in decision-making. Attendees also provided recommendations for maximizing community engagement.

5.2.6 How were stakeholders engaged?

The SLRCOG hosted a series of listening sessions on March 1 and March 2, 2017, in Bishopville. Participants included downtown business owners, stakeholders from the agricultural and industrial sectors, and non-governmental organization (NGO) representatives. Over the two days, 28 participants attended the four sessions. Stakeholders discussed problems in downtown Bishopville, identified concerns related to their interest, identified concerns regarding a new route (e.g., its effect on economic development), and suggested ways to maximize public outreach and involvement.

Downtown Commercial Sector

The listening session was held on March 1, 2017, in the Bishopville Cotton Museum and had 12 participants in attendance. Participants noted that heavy truck traffic was not an issue until the raised medians were installed on Main Street (US 15) as part of a road diet. The presence of heavy trucks downtown raised safety concerns for Main Street (US 15) business patrons. Also, participants suggested that truckers speed through downtown to avoid stopping at traffic signals. The speed and volume of heavy trucks through downtown present multiple safety concerns for business patrons, including the proximity of trucks to on-site street parking, as well as downtown walkability.

Some participants expressed concern that truck drivers may still use Main Street (US 15) because it is the shortest route. Others suggested that drivers of trucks would rather avoid maneuvering the constricted lanes and narrow turns through downtown but continue to use Main Street (US 15) with no alternate route. Business owners also expressed concern regarding the ability to attract new businesses. The City has established a goal to encourage economic development, and business development would increase business revenue and support existing businesses. Collectively, business owners would like to draw large businesses to the area by using existing industrial areas.

Agricultural Sector

This listening session was held on March 2, 2017, at the Clemson Extension Center and had nine attendees representing the agricultural sector. Participants suggested there is not an issue with truck traffic through downtown and that diverting trucks to a designated truck route would impact downtown businesses. Participants suggested reconfiguring Main Street (US 15) back to a four-lane roadway, using funds to repair local roads and bridges, and waiting for new industry to move into the area before considering a truck route. Participants noted that farmland is scarce, making it difficult to relocate impacted farms resulting from a new route. Participants added that they were opposed to splitting farmland that would render the property unfarmable. All participants supported a swift decision about the truck route suggesting delays would adversely affect the agricultural community.

Industrial Sector

This listening session was held on March 2, 2017, at the City/County Building and three representatives from the industrial sector were in attendance. The Coca-Cola plant was the main topic of discussion. Approximately 100 trucks travel to and from the plant each day seven days a week. Most of the truck movement is on Wags Drive to E. Church Street (SC 341) continuing east to I-20. Coca-Cola representatives stated they were not aware of the complaints about trucks from surrounding neighbors.

Non-Governmental Organizations

Four people attended the listening session for NGOs held on March 2, 2017, at the City/County Building in downtown Bishopville. Participants expressed concern about heavy truck traffic downtown. The group also expressed concern about rerouting trucks away from downtown because of noise, safety, and potential for crashes near schools and the prison.

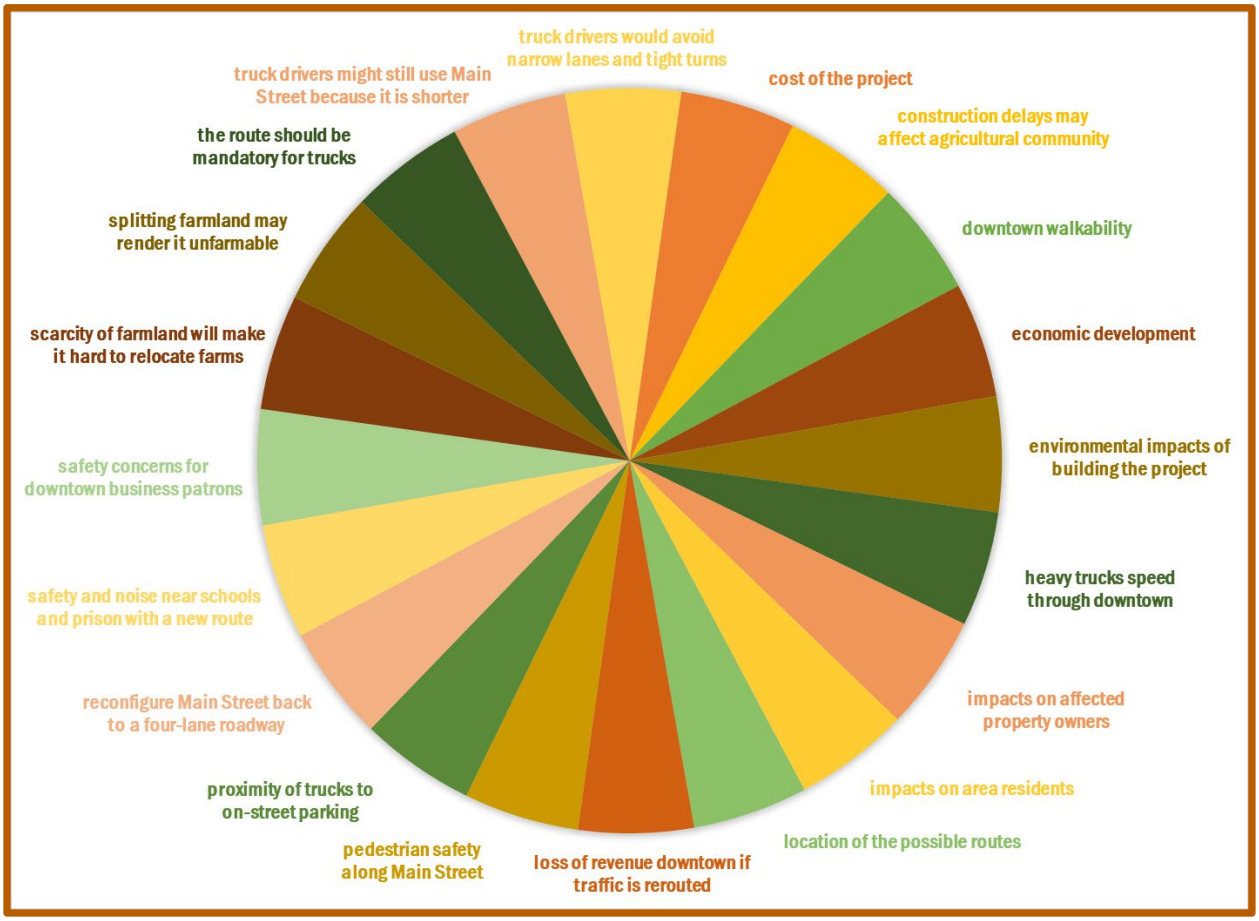
The group provided historical knowledge of previous truck routes and concerns regarding current traffic issues. Some of the traffic concerns included parking and pedestrian safety along Main Street (US 15) and vegetation in the median impairing motorist sight distance. The consensus was that if a new route was built to reduce truck traffic downtown, then the route should be mandatory.

Attendees expressed concerns about the lack of growth in the Bishopville area. They also expressed concern for the potential impacts on downtown businesses, suggesting that a new road could also reroute vehicular traffic away from downtown. Although participants agreed that truck traffic on Main Street (US 15) was a problem, they would oppose a project unless it provided an economic benefit.

5.3 Public Involvement

Public involvement is one of the most important components in the *NEPA* process. 23 CFR 771.105(c) states "Public involvement and a systematic interdisciplinary approach are essential parts of the development process for proposed actions". Many of the recurring public comments are illustrated in **Exhibit 5-3**, and public involvement activities are summarized below. More detailed information on public involvement and public involvement materials can be found in **Appendix C**.

Exhibit 5-3. Summary of Recurring Public Comments



5.3.1 How was the public involved when the project first started?

Public involvement during the development of the Environmental Assessment (EA) between 2010 and 2012 included briefings and discussions with local officials and the regional council of governments, stakeholder outreach, and public meeting forums. The dates and purpose of each activity are summarized in the list below:

- **July 15, 2010** - Purpose and need discussion with Lee County Council
- **September 21, 2010** - Project overview presentation to Bishopville City Council
- **August 3, 2010/September 13, 2010/July 29, 2011** - Project background, purpose and need, schedule, and potential alternatives discussion with SLRCOG.
- **Summer 2010** - Development of Community Support Survey Analysis to define the problem statement (e.g., purpose and need) and to gauge support of potential solutions. Targeted stakeholder meetings provided an opportunity to maximize community participation.
- **August 25, 2010** - Targeted meetings with local church groups, citizen groups, and community organizations to identify potentially vulnerable populations, explore ways to maximize survey participation, and solicit feedback on the overall project.
- **September 9, 2010** - Meetings with community leaders to strategize methods for maximizing community outreach and engagement.
- **September 15, 2010** - Targeted meetings with local church groups, citizen groups, and community organizations to identify potentially vulnerable populations, explore ways to maximize survey participation, and solicit feedback on the overall project.
- **September 20-24, 2010** - Targeted multi-day outreach at commercial establishments and public centers to collect survey information.
- **October 5, 2010** - Bishopville Project Community Information Meeting at Lee Central High School to provide project information, gather input from participants on the purpose and need, and gather additional survey feedback.
    - Approximately 130 citizens attended the meeting. The majority of 100 comments received at the meeting noted concerns with pedestrian safety and the amount and speed of truck traffic in downtown Bishopville. Some also expressed concern with the cost associated with the project and suggested turning Main Street (US 15) back into a four-lane street. Other concerns included the impacts associated with an alternate truck route, including impacts on small businesses along Main Street (US 15) and farmland.
    - After the meeting, SCDOT received a petition with 91 signatures opposing a truck route west of Bishopville from US 15 (north) to Browntown Road due to impacts on residents.
    - Out of the 280 surveys distributed at the Community Information Meeting, 236 responses were received. Commenters stated that residents would often avoid downtown due to speeding trucks and perceived safety issues. In addition, responders believed that a truck route could improve safety and traffic flow through downtown.
- **November 13, 2012** - Public Hearing held following the issuance of the EA, which assessed seven build alternatives to re-route traffic from Main Street (US 15).
    - At the public hearing, a majority of those in attendance were not in favor of the project. Subsequently, the City of Bishopville and Lee County passed resolutions against the Preferred Alternative proposed in the EA. Because of the public controversy associated with the project, FHWA informed SCDOT that an EIS would have to be prepared if the SLRCOG wanted the project to move forward. More recent correspondence from the City of Bishopville and Lee County expressing their support of the project can be found in **Appendix C** and **Appendix D**.

5.3.2 How has the public been involved since the DEIS process began?

SCDOT has held a number of public meetings throughout the project-planning process to keep the public informed on key decisions and get input. A presentation was given at each meeting describing the project progress and attendees were encouraged to provide comments. In addition to the public meetings, SCDOT and the project planning team met with local officials and stakeholders to answer questions, discuss feedback from previous meetings, and provide details about the information to be presented in upcoming public meetings. Stakeholders included City and county staff, City Council members, the Chamber of Commerce, business and farm owners, and environmental organizations.

Public Meeting (February 19, 2015)

SCDOT and SLRCOG held a public meeting to kick off the project-planning process after deciding to move forward with the project and the preparation of an EIS.

Public Scoping Meeting (May 9, 2017)

The purpose of the meeting was to provide an overview of the *NEPA* process and present the project's draft purpose and need statement. A total of 83 people attended, and 43 comments were submitted during the comment period. The majority of the comments expressed support for the project and provided personal observations of the negative effects of increasing truck traffic. Others provided comments in opposition to the project due to impacts on landowners, environmental concerns, and the cost of the project versus other needs in the community.

Elected Officials - Joint Council Meeting (July 25, 2017)

The Lee County Council and the City of Bishopville Council attended the Elected Officials Briefing. The purpose of the meeting was to reintroduce the project with a presentation on the project's history and explain the steps to be implemented for the preparation of an EIS. The presentation included details discussed in the Public Scoping Meeting held on May 9, 2017, and a draft list of potential stakeholders was provided to the council members. The group identified a few key people to represent the neighboring communities to be included in the stakeholder group.

Stakeholder Meeting (October 26, 2017)

At the first stakeholder meeting, stakeholders were introduced to the project team and presented with the information shown at the Public Scoping Meeting and Joint Council Meeting. The presentation included the project background, *NEPA* scoping process, and steps needed to prepare the EIS. The stakeholders were also provided with the comments received from the public scoping meeting.

The meeting was attended by 22 stakeholders. The group was told what was expected as a stakeholder member. Members were asked to serve in an advisory role, providing information to their community groups and organizations. Members would gather comments from their appropriate communities and relay information to the project team. During the meeting, stakeholders asked questions and provided comments about the project. Discussion included communication methods between the project team and community groups and details about the project including funding and which agencies were responsible for decisions during scoping.

Stakeholder Meeting and Public Information Meeting (June 7, 2018)

The purpose of the meeting was to present the preliminary build alternative corridors under evaluation. The design details of each preliminary alternative were presented along with the challenges associated with the proposed alternatives. A total of 67 people attended, with 38 comments received during the comment period. The majority of the comments were either in favor of or in opposition to specific routes. Others expressed total support of the project regardless of the route. Some expressed support for the No-Build Alternative as they were opposed to the project. Comments in support of the project and opposition to the project were relatively split.

A stakeholder meeting was held before the public information meeting. The meeting was attended by 12 participants. The purpose of the meeting was to allow stakeholders to ask questions and allow them to provide comments on the project purpose and need and potential impacts for the project.

Stakeholder Meeting and Public Information Meeting (August 22, 2019)

The purpose of the public meeting was to present the proposed build alternatives, discuss the next steps in the evaluation process, and gather comments on the project. Details about the alternative-screening process and how it was used to identify potential impacts were presented. Displays were provided for viewing after the presentation, and project team members were available to answer questions and hear feedback. Approximately 100 people were in attendance, and 22 comments were received during the comment period. Similar to the 2018 meeting, comments were split between supporting and opposing the project, and many comments were about the alternatives.

A stakeholder meeting was held before the public information meeting. The meeting was attended by 22 members of the stakeholder group and the public. Attendees had the opportunity to review the initial proposed build alternatives, ask questions, and provide comments. The presentation and discussion included the reasons for the location of the proposed alternatives, the alternative-screening process, project schedule, potential impacts of the project, and how the project would be funded.

6 LIST OF PREPARERS

Name	Organization	Title	Education	Years	Project Role
FEDERAL HIGHWAY ADMINISTRATION (FHWA)					
Emily O. Lawton	FHWA	Division Administrator, South Carolina Division	B.S., Civil Engineering	31	Review and approval of the DEIS.
J. Shane Belcher	FHWA	Lead Environmental Specialist	B.S., Environmental Science	23	Responsible for the development and review of the DEIS.
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (SCDOT)					
Bener Amado, PE	SCDOT	Program Manager	M.S., Civil Engineering B.S., Civil Engineering	26	Responsible for developing the project.
Christopher Cooper	SCDOT	NEPA Coordinator/ Hazardous Waste	A.A., Communications	18	DEIS and hazardous materials reviewer.
David Kelly	SCDOT	NEPA Division Manager/ Architectural Historian/Noise	M.A., American Studies M.H.P., Historic Preservation B.A., History and Art History	20	Cultural resources and noise analysis reviewer.
Ed Frierson	SCDOT	NEPA Coordinator/Biologist	M.S., Wildlife Biology	32	Natural resources reviewer.
Erin Jenkins	SCDOT	Permits Coordinator	B.S., Biology	15	Natural/water resources and wetlands reviewer.
Henry Phillips	SCDOT	NEPA Division Manager	B.S., Management (Environmental)	28	Development and review of the DEIS and air quality reviewer.
Jacob Meetze, PE	SCDOT	Assistant Program Manager	B.S., Civil Engineering	11	SCDOT Project manager responsible for team meeting coordination, maintaining project files, and communicating project updates.
Mickey Queen	SCDOT	Compliance Division Manager	B.S., Civil Engineering	18	Environmental commitments and construction impacts reviewer.
Tracy Martin	SCDOT	Chief Archaeologist	M.A., Anthropology	21	Cultural resources reviewer.
CONSULTANT TEAM - DRMP					
Jeff Miller	DRMP	Graphics and Visualization Coordinator	B.S., Organizational Leadership A.S., Graphic Design	21	Graphics and visualization.

Name	Organization	Title	Education	Years	Project Role
Jim Beck, PE, AICP, ENV SP	DRMP	Vice President	B.S., Civil Engineering	26	Project management, QA/QC, roadway design.
Kim Bereis, AICP	DRMP	Carolinas Project Development and Environmental Manager	M.S.P., Urban and Regional Planning B.S., Environmental Studies	23	Responsible for NEPA process oversight, QA/QC, technical report author, DEIS author.
Kristen Maines, ENV SP	DRMP	Project Manager/Senior Environmental Planner	M.A., Policy Studies Master's, Economics B.S., Economics/Political Science	23	Project manager for the consultant team, technical report author, DEIS author, senior technical reviewer, QA/QC.
Lisa Moon, PE	DRMP	Traffic Engineering Leader	B.S., Civil Engineering	31	Senior traffic reviewer, QA/QC.
Mike Hage, PE	DRMP	Roadway Supervising Engineer	B.S., Civil Engineering	11	Roadway design and QA/QC.
Ryan Mitchell, PE	DRMP	Water Resources Leader/Project Manager	B.S., Civil Engineering	13	Engineering support, oversight, and review of technical data and impact calculations.
Tanya Thompson	DRMP	Transportation Planner	B.S., Environmental Science	2	Technical report author, DEIS author, GIS.
Thomas Yocom	DRMP	Subsurface Utility Engineering Manager	Diploma, Civil Engineering Technology	40	Utility coordination and impact assessment.
Zachary Mega, EI	DRMP	Water Resources Engineer	B.S., Environmental Engineering	4	Technical report author, DEIS author, GIS mapping and impact calculations, DEIS mapping/figures task lead.
CONSULTANT TEAM - CDM SMITH					
Alan Hachey	CDM Smith	Senior Environmental Planner	M.R.P., Regional Planning B.A., Art History	21	Air quality and farmland technical report author.
Andrew Ryan	CDM Smith	Geologist	B.S., Geosciences	8	Hazardous materials report author, QA/QC.
Ariel Weyandt	CDM Smith	Transportation Planner	M.C.R.P., City/Regional Planning B.S., Business Administration	4	Noise analyst, GIS mapping, and impact calculations.
Brandon Denny, PE	CDM Smith	Transportation Engineer	M.S., Civil Engineering B.S., Civil Engineering	10	Traffic impact assessment author and QA/QC reviewer.
Brendan Brown	CDM Smith	Environmental Scientist	M.S., Biological Sciences B.S., Forest Environmental Resources	16	Hazardous materials and natural resources technical report author.
Gina Murphy	CDM Smith	Transportation Planner	Master's, Urban Planning B.A., Architectural Studies	15	Technical report QA/QC reviewer.

Name	Organization	Title	Education	Years	Project Role
Giovanni Cosentino	CDM Smith	Environmental Planner	M.S., Geosciences B.A., Environmental Studies	7	GIS mapping and impact calculations; noise analysis.
Karen Hadley, AICP	CDM Smith	Project Manager/Senior Environmental Planner	B.A., Geography B.A., Environmental Studies	21	Project manager for CDM Smith.
Krista R. Goodin, AICP	CDM Smith	Senior Transportation Planner	M.S., Environmental Planning and Management B.A., Environmental Studies	21	Technical report author.
Liza Amar	CDM Smith	Travel Demand Modeler	M.S., Transportation Planning B.S., Civil Engineering	15	Modeling analyst.
Michael Belvin	CDM Smith	Technical Lead/Senior Environmental Planner	B.S., Agricultural	29	Technical support for noise analysis and natural resources.
CONSULTANT TEAM - CIVIC COMMUNICATIONS					
Julie Hussey	Civic Communications	Public Information and Outreach Specialist	B.A., Business Administration	23	Public involvement lead, stakeholder coordination, public outreach, meeting support.
CONSULTANT TEAM - NEW SOUTH ASSOCIATES					
James Stewart	New South Associates	Archaeologist	M.A., Archaeology B.A., Archaeology	11	Archaeologist for cultural resources.
Natalie Adams Pope	New South Associates	Executive Vice President, SC Branch Manager	M.A., Public Service Archaeology B.A., Anthropology	31	Principal investigator for cultural resources, technical report author.
CONSULTANT TEAM - RED BAY ENVIRONMENTAL					
Judson Goff	Red Bay Environmental	Principal	B.S., Environmental Management/Economics	23	Project manager for natural resources: wetlands/waters, protected species, impact assessment, permitting.

7 REFERENCES

AcreValue Analytics Technology Company. *Crop History Report.* Retrieved November 2021 from https://www.acrevalue.com/report/view/1959637.

American Association of State Highway and Transportation Officials (AASHTO). (2016, August). *Practitioner's Handbook - Applying the Section 404(b)(1) Guidelines in Transportation Project Decision-Making*. Retrieved from https://environment.transportation.org/pdf/programs/ph14-2.pdf.

AASHTO. (2016, August). *Practitioner's Handbook - Assessing Indirect Effects and Cumulative Impacts Under NEPA*. Retrieved https://environment.transportation.org/pdf/programs/ph12-2.pdf.

AASHTO. (2016, August). *Practitioner's Handbook - Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects.* Retrieved from https://environment.transportation.org/wp-content/uploads/2021/05/ph07-2.pdf.

(2021). *Bishopville Truck Route Project Abbreviated Visual Impact Assessment.*

(2021). *Bishopville Truck Route Project Air Quality Technical Memorandum*.

(2021). *Bishopville Truck Route Project Community Impact Assessment*.

(2021). *Bishopville Truck Route Project Cultural Resources Assessment*

(2020). *Bishopville Truck Route Project Early Utility Coordination Summary*.

(2021). *Bishopville Truck Route Project Economic Development Report*.

(2021). *Bishopville Truck Route Project Environmental Justice Assessment.*

(2021). *Bishopville Truck Route Project Farmlands Technical Memorandum.*

(2021). *Bishopville Truck Route Project Hazardous Materials/Waste Survey*.

(2021). *Bishopville Truck Route Project Natural Resources Technical Memorandum.*

(2021). *Bishopville Truck Route Project Traffic Analysis Study.*

(2021). *Bishopville Truck Route Project Traffic Noise Analysis.*

Bridges, Structures, and Hydraulics: Location and Hydraulic Design of Encroachments on Flood Plains, 23 CFR 650A, (1994). *Bridges, Structures, and Hydraulics: Erosion and Sediment Control on Highway Construction Projects,* 23 CFR 650B, (1994).

ChurchFinder. *Churches in Bishopville SC*. Retrieved from https://www.churchfinder.com/churches/sc/bishopville.

Ciomek, S. and Quinn, K. D. (2018, August 31). *Phase I Architectural Survey of Bishopville Bypass Alternatives.* New South Associates.

City of Bishopville (Hannah M. Parker), personal communication with DRMP (Kristen Maines), 2019.

City of Bishopville. *City of Bishopville Parks.* Retrieved from https://cityofbishopvillesc.com/city-parks.html.

City of Bishopville. *Home* [Facebook page]. Facebook. Retrieved from https://www.facebook.com/City-of-Bishopville-332921090744635.

City of Bishopville. *Places to visit while in Bishopville.* Retrieved from https://cityofbishopvillesc.com/places-to-visit.html.

The Clean Air Act of 1963, as amended, 42 USC 7401, (1990).

The Clean Water Act of 1972, as amended, 33 USC 1251, (1987).

Council on Environmental Quality. (1997, January). *Considering Cumulative Effects Under the National Environmental Policy Act.*

Definition of Waters of the United States, 33 CFR Part 328, (1986).

Determining Conformity of Federal Actions to State or Federal Implementation Plans, 40 CFR Part 93, (1993).

The Endangered Species Act of 1973, as amended, (1982).

Environmental Impact Statement: Alternatives including the Proposed Action, 40 CFR 1502.14, (1978).

Environmental Impact Statement: Incomplete or unavailable information, 40 CFR 1502.22, (1986).

Environmental Laboratory. (1987, January). *1987 Corps of Engineers Wetlands Delineation Manual*. US Army Corps of Engineers, Waterways Experiment Station.

Environmental Protection Agency (EPA). *Integrated Risk Information System (IRIS).* Retrieved January 2020 from http://www.epa.gov/iris.

EPA, IRIS. (2003, February 28). *Diesel Engine Exhaust, Section II.C.* Retrieved May 2020 from https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0642_summary.pdf.

EPA. *NAAQS Table*. Retrieved February 2020 from https://www.epa.gov/criteria-air-pollutants/naaqs-table.

EPA. (2020). *EJSCREEN: Environmental Justice Screening and Mapping Tool.* Retrieved from https://www.epa.gov/ejscreen.

EPA. (2020). *Nonattainment Areas for Criteria Pollutants (Green Book).* Retrieved January 2020 from https://www.epa.gov/green-book.

EPA. (2016, March). *Promising Practices for EJ Methodologies in NEPA Reviews.* Retrieved from https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf.

EPA. (n.d.). *Summary of the Resource Conservation and Recovery Act*. Retrieved March 2020 from https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act.

EPA. (2018, June 4). *Superfund: Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Overview*. Retrieved March 2020 from https://www.epa.gov/superfund/superfund-cercla-overview.

Executive Order No. 11988, 3 CFR Part 117 (1977).

Executive Order No. 11990, 3 CFR Part 121 (1977).

Executive Order No. 12898, 59 FR 7629 (1994, February 16).

Executive Order No. 13166, 65 FR 159 (2000, August 16).

Farmland Protection Policy: General Provisions, 7 USC 4201, (1981).

Farmland Protection Policy: Identifying effects of Federal programs on conversion of farmland to nonagricultural uses, 7 USC 4202, (1990).

Farmland Protection Policy Act, 7 CFR Part 658, (1984).

Federal Aviation Administration. (n.d.). *Fundamentals of Noise and Sound*. Retrieved June 2020 from https://www.faa.gov/regulations_policies/policy_guidance/noise/basics.

Federal Emergency Management Agency (FEMA). (2020). *FEMA Flood Map Service Center*. Retrieved February 2020 from https://msc.fema.gov.

Federal Highway Administration (FHWA). (2016, October 18). *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*. Retrieved January 2020 from https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/2016msat.pdf.

FHWA. (2015, April 1). *FHWA Environmental Justice Reference Guide.* Retrieved from https://www.kipda.org/wp-content/uploads/2021/01/FHWA_EJ_Guide_2015.pdf.

FHWA. (n.d.). *Environmental Review Toolkit: NEPA and Transportation Decisionmaking*. Retrieved from https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx.

FHWA. (n.d.). *Environmental Review Toolkit.* Retrieved from https://www.environment.fhwa.dot.gov/default.aspx.

FHWA. (2011, December 16). *Guidance on Environmental Justice and NEPA.* Retrieved from https://www.environment.fhwa.dot.gov/env_topics/ej/guidance_ejustice-nepa.aspx.

FHWA. (2015, January). *Guidelines for the Visual Impact Assessment of Highway Projects*. Retrieved https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.pdf.

FHWA. (2012, June 14). *FHWA Order 6640.23A*. Retrieved from https://www.fhwa.dot.gov/legsregs/directives/orders/664023a.cfm.

FHWA. (1994, December 7). *Policy Guide Subchapter G - Engineering and Traffic Operations.* Retrieved May 2020 from https://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0650b.htm.

FHWA. (2006). *Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).*

Federal Register, Volume 72, Number 37. (2007, February 26).

Federal Transit Administration. (2016, August). *Section 4(f) of the Department of Transportation Act.* Retrieved March 2020 https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/SOP%2018.pdf.

Fitzpatrick, B. (2012). *The Thomas Fraser House* [Photograph]. Taylors. https://destinyunknown.smugmug.com.

Goff, J. (2020). *Bishopville Truck Route - Protected Species Suitable Habitat & Known Population Assessment.* Red Bay Environmental.

Health Effects Institute (2007, November). *Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects.* Retrieved May 2020 from https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects.

Land and Water Conservation Fund Act of 1965, as amended, 36 CFR 59.3, (1987).

Lee County. *Departments & Elected Officials.* Retrieved from https://www.leecountysc.org/directory/departments___elected_officials/index.php.

Lee County (Alan Watkins), personal communication with DRMP (Shawn Blanchard), 2017.

Lee County Chamber. *Business Directory Search*. Retrieved from http://theleechamber.com/list.

Lee County Park and Recreation. *Facility & Park Locations.* Retrieved from https://leecountyparksandrec.org/facility-locations.

Lee County School District. Retrieved March 2020 from https://www.leeschooldistrictsc.org.

Lockerman, K. and Stephens, S. (2012, April 13). *Phase I Architectural Survey of Bishopville Bypass Alternatives and Archaeological Survey of Preferred Alternative.* New South Associates.

The Migratory Bird Treaty Act of 1918, as amended, 16 USC 703-712, (2006).

National Center for Educational Statistics. (n.d.). *2017-2018 Common Core of Data Public School Data, Lee County School District South Carolina.*

National Cooperative Highway Research Program (NCHRP). (1998). *NCHRP Report 403, Guidance for Estimating the Indirect Effects of Proposed Transportation Projects.*

NCHRP. (2002). *NCHRP Report 466, Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects.*

The National Environmental Policy Act (NEPA) of 1969, as amended. Retrieved February 2020 from https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/Req-NEPA.pdf.

NEPA and Agency Planning: Cooperating Agencies, 40 CFR 1501.6, (1978).

National Park Service (NPS). *Nationwide Rivers Inventory*. Retrieved May 2020 from https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm.

NPS. (2016, November 30). *National Rivers Inventory: South Carolina*. Retrieved May 2020 from https://www.nps.gov/subjects/rivers/south-carolina.htm.

National Primary and Secondary Ambient Air Quality Standards, 40 CFR Part 50, (1971).

New South Associates. (2020, February 15). *Cultural Resources Assessment Technical Memorandum.*

Oil Pollution Prevention, as amended, 40 CFR Part 112, (2009).

Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 CFR Part 772, (2010).

Requirements for Preparation, Adaption, and Submittal of Implementation Plans, 40 CFR Part 51, (1971).

Shepherd, R., Vasquez, and Pope. (2018, July 20). *Reconnaissance-Level Archaeological Survey of Bishopville Truck Route Segments*. *New South Associates Technical Report 2823.* New South Associates.

Santee-Lynches Regional Council of Governments (SLRCOG) (Jeff Parkey), personal communication with DRMP (Tanya Thompson), 2020.

SLRCOG. *SLRCOG website.* Retrieved March 2020 from http://www.santeelynchescog.org.

SLRCOG and SCDOT. (2008, March). *Advanced Project Planning Report (APPR) for Potential Bishopville Bypass From I-20 to S-29 in Lee County.*

SLRCOG. (2011, November 1). *City of Bishopville Comprehensive Plan*.

SLRCOG. (2011). *City of Bishopville Zoning Ordinance*.

SLRCOG. (2017, September 26). *Santee-Lynches 2017-2022 Comprehensive Economic Development Strategy.*

SLRCOG. (2019, June 3). *Forward 2045: Santee-Lynches Regional Long-Range Transportation Plan.*

SLRCOG. (2020). GIS Data.

SLRCOG. (2011, June 23). *Lee County Comprehensive Plan*.

SLRCOG. (2020, June 9). *Lee County Comprehensive Plan.*

SLRCOG. (2021, May 11). *Lee County Comprehensive Plan Bishopville Project 2030 Addendum.*

SLRCOG. (2020, October 5). *2021-2027 Transportation Improvement Program.*

SLRCOG (1990; revised 2011). *Zoning Ordinance for Lee County*.

Section 106 of the National Historic Preservation Act of 1966, as amended, 16 USC 470f, (1992).

Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Materials, 40 CFR Part 230, (2010).

South Carolina 811 website. Retrieved April 2020 from https://sc811.com/about.

South Carolina Department of Employment and Workforce (SCDEW). (2020, July 20). *Community Profile - Lee County*. Retrieved May 2020 from https://lmi.dew.sc.gov/lmi%20site/Documents/CommunityProfiles/04000061.pdf.

SCDEW. (2019). *Quarterly Census of Employment and Wages (QCEW) – 2019 Q3*.

SCDEW. (2019). *Quarterly Census of Employment and Wages – 2019 Q4.*

SCDHEC. (2018). *The State of South Carolina's 2018 Integrated Report (IR) Part I: Listing of Impaired Waters*. Retrieved February 2020 from https://www.scdhec.gov/sites/default/files/media/document/PN_IR_Part_I_2018.pdf.

SCDHEC. (2014, March). *BMP Handbook* (2014). Retrieved May 2020 from https://www.scdhec.gov/environment/bureau-water/stormwater/bmp-handbook.

SCDHEC. (2015). *Watershed Water Quality Assessment: Pee Dee River Basin*. *Technical Report No. 1029-15.* Bureau of Water. Retrieved February 2020 from https://www.scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Watershed/wwqa/Pee_Dee_WWQA_2015.pdf.

SCDHEC. (2019). *South Carolina Water Use Report 2018 Summary*. Bureau of Water.

SCDHEC. (n.d.). *SC Watershed Atlas: Pee Dee River Basin.* Retrieved March 2020 from https://gis.dhec.sc.gov/watersheds.

South Carolina Department of Natural Resources. (2015). *Lynches Scenic River*. Retrieved May 2020 from http://www.dnr.sc.gov/water/river/scenic/lynches.html.

South Carolina Department of Transportation (SCDOT). (2015, April 10). *Engineering Directive (ED 23).* Retrieved from http://info2.scdot.org/ED/ED/ED-23.pdf.

SCDOT. (n.d.). *Environmental Components*. Retrieved March 2020 from https://www.scdot.org/business/environmentalservices-components.aspx.

SCDOT. (2012). *Environmental Assessment: Bishopville Bypass*. Retrieved from https://www.scdot.org/inside/pdfs/PublicHearings/bishopvilleBypass_EA.pdf.

SCDOT. *Proposed Bishopville Truck Route*. Retrieved March 2020 from https://www.scdot.org/inside/BishopvilleTruckRoute/default.aspx.

SCDOT. (2009, May 26). *Requirements for Hydraulic Design Studies*.

SCDOT (2017, July). *Supplemental Technical Specifications for Seeding. Designation SC-M-810-4.*

SCDOT, Department of Right-of-Way. (2016, January; revised 2019, January). *Acquisition Manual.* Retrieved March 2020 from https://www.scdot.org/business/pdf/rightofway/Acquisition.pdf.

SCDOT, Department of Right-of-Way. (2016, January). *Relocation Assistance Manual*. Retrieved March 2020 from https://www.scdot.org/business/pdf/rightofway/Relocation.pdf.

SCDOT. (2007). *Standard Specifications for Highway Construction*.

SCDOT. (2017). *2017-2022 Statewide Transportation Improvement Program.*

SCDOT. (2021). *2021-2027 Statewide Transportation Improvement Program.*

SCDOT. (2014, December). *Stormwater Quality Design Manual*.

SCDOT. (2014, September 1). *Traffic Noise Abatement Policy*.

South Carolina *Scenic Rivers Act of 1989*, SC Code of Regulations 49-29, (1989).

South Carolina State Parks. *Lee State Park*. Retrieved from https://southcarolinaparks.com/lee.

South Carolina *Stormwater Management and Sediment Reduction Act of 1991*, SC Code of Regulations 72-400, (1991).

Steam Electric Power Generating Point Source Category 1: Specialized definitions, 40 CFR 423.11, (2017).

Subpart A. Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 USC or the Federal Transit Laws: Definitions, 40 CFR 93.101, (2012).

Terminology and Index: Mitigation, 40 CFR 1508.20, (1978).

Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, Pub. L. 91-646, as amended by 100-17; 49 CFR 24.205 (A-F).

US Census Bureau. (2010). *Decennial Census.* Retrieved from https://www.census.gov/programs-surveys/decennial-census/data/tables.2010.html.

US Census Bureau. (2016). *American Community Survey (ACS) Five-Year Estimates.* Retrieved from https://data.census.gov/cedsci.

US Census Bureau. (2017). *ACS Five-Year Estimates.* Retrieved from https://data.census.gov/cedsci.

US Court of Appeals. (2008, June 8). *Natural Resources Council and Louisiana Environmental Action Network, Petitioners v. Environmental Protection Agency, Respondent.* Retrieved May 2020 from https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/$file/07-1053-1120274.pdf.

United States Department of Agriculture (USDA). (2000, December 12). *Prime Farmland*. Retrieved March 2020 from https://www.nrcs.usda.gov/wps/portal/nrcs/detail/null/?cid=nrcs143_014052

USDA Natural Resources Conservation Service (NRCS). (2019, September). *Web Soil Survey: Lee County, South Carolina* (Area Symbol SC061), Survey Area, Version 21. Retrieved from https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

USDA NRCS. (2012, August). *Part 523 — Farmland Protection Policy Act Manual.* Retrieved January 2020 from https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1049240.pdf.

USDA. (2017). *Census of Agriculture, Lee County Profile.* Retrieved December 2019 from https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/South_Carolina/cp45061.pdf.

United States Department of the Interior. (1986, January 6). *National Register of Historic Places Inventory - Nomination Form: Bishopville Multiple Resource Area*. Retrieved June 2020 from https://npgallery.nps.gov/NRHP/GetAsset/NRHP/64000762_text.

United States Department of Transportation. (2021, May 16). *Department Order 5610.2(c): US Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.* Retrieved August 2021 from https://www.transportation.gov/sites/dot.gov/files/Final-for-OST-C-210312-003-signed.pdf.

United States Fish and Wildlife Service Mitigation Policy, 46 FR 7644-7663, (1981).

Water Pollution Prevention: Permits for Dredged or Fill Material, 33 USC 1344, (1987).

Water Quality Planning and Management: Total Maximum Daily Loads and Individual Water Quality-Based Effluent Limitations, 40 CFR 130.7, (2001).

Wild and Scenic Rivers: Congressional Declaration of Policy, 16 USC 1271, (1968).

8 DISTRIBUTION LIST

Notification of DEIS Publication and/or Electronic Copy of the DEIS	
Federal Agencies	US Army Corps of Engineers
	US Fish and Wildlife Service
	US Environmental Protection Agency
State Agencies	South Carolina Department of Archives and History
	South Carolina Department of Health and Environmental Control
	South Carolina Department of Natural Resources
	South Carolina Department of Public Safety
	South Carolina Department of Transportation, District 1 Office
	South Carolina Department of Transportation, Headquarters
	State Historic Preservation Office
Local Government or Agencies	Santee-Lynches Regional Council of Governments
	City of Bishopville
Federal Representatives	Senator Lindsey O. Graham
	Senator Timothy E. "Tim" Scott
	Congressman Ralph W. Norman Jr.
State Elected Officials	Governor Henry D. McMaster
	Lieutenant Governor Pamela S. Evette
Senate	Senator J. Thomas McElveen III (District 35)
	Senator Gerald Malloy (District 29)
House of Representatives	Representative William W. "Will" Wheeler III (District 50)
City of Bishopville Elected Officials	Mayor Grady A. Brown Sr.
	Mayor Pro Tempore Ennis Bryant Sr.
	Council Member Edward Byrd
	Council Member Gloria S. Lewis
	Council Member Retta D. Tindal
	Council Member Wayne Hancock
	Council Member Shirley Wesley Hill
	Police Chief Calvin Collins
Lee County Council Members	County Administrator Alan Watkins
	R. Travis Windham (Chairman, District 1)
	Ronald H. Fountain (District 2)
	Alexander Boyd (District 3)
	Gordon W. Eckley (District 4)

	Jackie Josey (District 5)
	Charles A. Beasley (District 6)
	Johnette M. Caughman (District 7)
Lee County Emergency Services	Tim Dubose (EMS Director)
	Michael Bedenbaugh (Fire Chief/EMD Director)
Lee County Planning and Zoning	Arlene Samuel (Planning and Zoning Director)
Community Advocacy Groups	South Carolina Wildlife Federation
	Wateree Community Actions, Inc.
Business Community	Lee County Chamber of Commerce
	Lee County Economic Development Alliance
	South Carolina Trucking Association
Civic Organizations	Dennis Elementary
	Lee Central Middle School
	Lee Central High School
	Lee County Career & Technology Center
	Lee County Public Library
	Lee County School District
	Lee Academy
	Bethlehem United Methodist Church
	Bishopville Church of God
	Bishopville First Baptist
	Bishopville Presbyterian Church
	Bishopville Kingdom Hall of Jehovah's Witnesses
	Cousar Memorial Presbyterian
	First Church of Nazarene
	Joshua Church of Deliverance
	Liberty Hill Baptist Church
	Mt Calvary Baptist Church
	Mt Hermon Baptist Church
	Mustard Seed Baptist Church
	New Bethel AME Church
	New Journey Bishopville Church of God
	Now Faith Church of Deliverance
	St John AME Church
	Tabernacle of Champions

	Weeping Mary Baptist Church
	Wesley Memorial Church
	Lee County Lions Club
	Affordable Housing Coalition of South Carolina
	South Carolina Hospital Association
	The ALPHA Behavioral Health Center
	CareSouth Carolina
	Fresenius Kidney Care Lee County
	Gibbs Activity Center
	Palmetto Health - USC Family Medicine
	Bishopville Country Club
	NAACP Chapter
	Lee County Correctional Facility
Neighborhood Associations	Ashley Park Apartments
	Ashwood Pointe Apartments
	Cloverleaf Apartments
	Fieldale Apartments
	Ivy Terrace Apartments
	Lee County Senior Apartments
	Lynches River Apartments
	Peppertree Apartments
	Spring Garden Apartments
	Woodside Apartments
	McCoy Memorial Nursing Center Assisted Living
Utilities	Charter Spectrum
	Frontier Communications
	System & Solutions, Inc.
	Farmers' Telephone Cooperative
	Duke Energy
	Dominion Energy
	City of Bishopville Wastewater
	Cassatt Water Company
	City of Bishopville Water
	Black River Electric Cooperative

INDEX

A

B

C

D

E

F

G

H

I

L

M

N

O

P

APPENDICES