APPENDIX A

TECHNICAL ANALYSES

PLANNING CONTEXT

Over the past 20 years, several plans, studies, and concept designs have been developed that relate directly or indirectly to the Lower Saluda Greenway Feasibility Study. To ensure that previous planning is considered and built upon throughout the feasibility study process, a review of prior work was conducted and is summarized in **Table A.1-1**. To provide an understanding of how prior efforts dovetail with the analyses being conducted as part of this feasibility study, **Table A.1-2** shows the areas of emphasis of each previous planning effort.

Table A.1-1 | Previous Planning Summary

PLAN	YEAR COMPLETED	OWNER	SUMMARY
Saluda Riverwalk Planning and Design	1996-Present	The River Alliance	The Saluda Riverwalk is a three-mile extension of the Three Rivers Greenway. This section ties to the existing Columbia Riverfront Canal and the City of West Columbia.
Boyd Island Master Plan	2006-Present	The River Alliance	The Boyd Island Master Plan provided a conceptual plan for a spur to the Saluda Riverwalk, located on a four-acre island at the confluence of the Saluda, Broad, and Congaree Rivers. The plan includes two-thirds of a mile of trails and overlooks.
The Lower Saluda Greenway Study	2012-2013	The River Alliance	The Lower Saluda Greenway Study reviewed the possible connection between the Saluda Riverwalk and the Lake Murray Dam. Plans and a proposed cost estimate were completed with the hope of including them in the proposed Lexington County capital sales tax. The sales tax referendum failed to pass, so no funding source was identified to advance the project.
The Lower Saluda Greenway Initiative	2017	Mungo Foundation and Lexington County	The study focused on defining the Lower Saluda Greenway district by considering gateways, assets, and major roadway corridors. Improvements focused on road diets and intersection improvements.

PLAN	YEAR COMPLETED	OWNER	SUMMARY
ICRC 2020-2030 Strategic Plan	2018-2019	Irmo Chapin Recreation Commission	The 2020-2030 Strategic Plan was designed to provide a conceptual framework for ICRC operations and capital improvements for a 10-year period. Goals include expanding programs and activities and promoting walkable infrastructure for encouraging healthy and active lifestyles. Strategic facility objectives and priorities include the expansion of the Saluda River Greenway.
Midlands Regional Competitiveness Report	2019-2020	Engenuity SC	The report looks at the indicators of competitive communities through talent, innovative capacity, entrepreneurial and business environment, industry clusters, and livability.

Table A.1-2 | Previous Planning Areas of Emphasis

PLAN	PUBLIC OUTREACH	DEMOGRAPHICS	SOCIO-ECONOMICS	ENVIRONMTENTAL	CULTURAL	DEMAND	CONNECTIVITY	SAFETY	TRANSPORTATION	RECREATION
Saluda Riverwalk Planning and Design				✓	✓		✓			✓
Boyd Island Master Plan				✓	✓		✓			✓
The Lower Saluda Greenway Study	✓				✓		✓			✓
The Lower Saluda Greenway Initiative	✓						✓	✓	✓	✓
ICRC 2020-2030 Strategic Plan	✓	✓	✓	✓	✓					✓
Midlands Regional Competitiveness Report		✓	✓		✓					✓

FIELD ANALYSIS

Members of the project team met and walked the majority of the project area on April 27-28, 2020; the remainder of the project area was walked on August 19, 2020. Over these three days, the team walked the entire length of the project scope (i.e., I-26 to the Lake Murray Dam), reviewing and analyzing the current conditions of the project area, as well as recording opportunities and constraints to implementation. Key observations are documented in the sections that follow, grouped by geographic area along the project limits.

I-26 to CR Jackson Property (~5,000LF)

I-26 over greenway corridor

The walk began at the I-26 overpass (SCDOT property) and continued northwest onto and through the Dominion Energy property, avoiding the property owned by Synergy Utilities. This area is a mix of low and upper topography. The majority of the property from the open ditch at I-26 is marginal wetlands. As you get closer to the access drive, you come to high ground where the area is heavily wooded with a mix of pine and hardwood trees. There will need to be a crossing of the access road to the water plant owned by Synergy Utilities. After crossing this access road there will need to be some small ductile pipes installed, as the ground has some rolling topography. Overall, this area appears to be devoid of wetlands. However, there is a wetlands area just north of the Synergy property, so the path would most likely need to go around this area. Two small creeks will need to be crossed; both would be less than a 30-foot crossing. There are protected wetlands that Dominion Energy has delineated.

The walk continued in a southwest direction, heading directly to the edge of the river. From here, the project team headed west along the river. The proposed greenway should be able to be within 20 to 30 feet of the riverbank, as the elevation appears to be high enough to avoid routine flooding. The walk continued west until

reaching Stoops Creek. The team travelled up and down the creek looking for the best crossing, which appears to be approximately 130 feet from the bank of the Saluda River. This will be a substantial crossing of approximately 50 to 75 feet in length. The greenway would continue along the bank of the Saluda River until it reaches the CR Jackson property. There is also a small creek at the property line that would need to be crossed, approximately 30 feet in length.

River views from greenway corridor

CR Jackson to I-20 (~1,800LF)

This section of the walk began at the southern end of the CR Jackson property at the existing creek bed. The area at this location will require a boardwalk due to the existing side slope. There are large rocks and broken up concrete on the slope as well, requiring the boardwalk to continue approximately 300 to 400 feet. Beyond this, the land transitions and the woods widen out, allowing for at-grade pavement. The area is heavily wooded and thick with underbrush and briars. Near the end of the CR Jackson property there is a Dominion Energy power line easement, which is void of trees but heavy in low brush and weeds. This area should be easily passable and is high enough to install at-grade pavement.

As you leave the power line easement and enter the woods again on Dominion Energy property, the woods are very dense. Briars and invasive plantings, along with a mix of hardwoods, will make for some tough construction in roughly the first 100 feet. The greenway will follow the river approximately 30 feet from shore. The woods begin to open up with some mature pines and larger hardwoods present. The greenway will have a few crossings of low areas, meandering along ridge lines that are adjacent to large low areas. As the greenway corridor gets closer to I-20, the woods begin to get thick with invasive plants and briars. Here, the ground is level, and construction should be fairly straightforward. The majority of this section should be an at-grade surface with a few boardwalk sections.

I-20 to Shaw Industries (~6,300LF)

This section of the walk began at the drainage ditch along the west side of I-20. This area contained a double ridge of high ground that was relatively flat and wide enough for the proposed greenway. The first approximately 900 linear feet would be on property owned by Palmetto Wastewater Reclamation. The next property is owned by Dominion Energy. This area is heavily wooded and a mix of pine trees and hardwoods. There are minor wetland areas that will need to be avoided with the proposed greenway alignments. The walk continued along the edge of the Saluda River for approximately 600 feet until crossing the Dominion Energy gas line. At this point, there is an existing cleared trail along the top of the bank that will be perfect for the proposed greenway. There are little to no areas of wetlands throughout this section. The existing trail ends at the old boat ramp at the end of Garden Valley Lane.

Existing cleared trail

There are some topography changes through the next sections, including areas of wetlands that may need to be avoided. A small creek crossing of approximately 25 to 30 feet will need to be crossed. The woods were very thick with lots of invasive plantings and briars. Traveling approximately another 2,700 linear feet, you reach the edge of Kinley Creek and the Shaw Industries property line.

Shaw Industries Property (~5,700LF)

The walk continued on the Shaw Industries property. Beginning at the property line at Kinley Creek, there will need to be a substantial bridge to cross the creek. There is a good crossing location approximately 50 feet from the mouth of the Saluda River that lines up with the existing sewer line. Once across the creek, the proposed greenway can follow the existing cleared 50-foot wide sewer easement. There are minor changes in topography, but this should be one of the easiest sections to construct of the entire project. A fence will need to be installed on the north side of the sewer easement to protect Shaw Industries' property.

After approximately 2,300 feet, there is a large drainage ditch. The proposed greenway will need to turn and travel north approximately 175 feet to an existing piped section. The previously mentioned new fence will need to follow this section and tie to the existing fencing around these piped sections. The greenway will then turn south back to the edge of the Saluda River and back to the sewer easement. The remaining 3,300 linear feet will continue along the existing sewer easement and will need to turn up and cross the existing asphalt access road to the existing pump station. There will need to be double vehicular gates on either side of the proposed greenway as it crosses the asphalt. The greenway will continue west until it reaches the fence line and ties into the existing Saluda Shoals Trail.

Saluda Shoals Park to Bush River Road (~3,400LF)

Leaving the Saluda Shoals Park property, the walk continued through the Cornerstone Presbyterian Church property, south of the soccer field, and around the Walker property. There is some major topography and heavily wooded areas traveling around the Walker property. A few short boardwalks will need to be installed to cross small creeks. After getting around the Walker property there will need to be a high boardwalk to cross a large creek between the property lines.

Approaching power line easement

The walk continued and entered more Dominion Energy property. This property is heavily wooded and lower in topography then the previous sections. Here, the greenway will need to be farther from the river to avoid areas of wetlands and areas prone to flooding. This section of the greenway will be more difficult to construct because of the topography, existing vegetation, and access. There is also a prevalence of wetlands in this area and large sections of low boardwalks will most likely be required. The greenway will continue to follow the river before turning north along the Ruth property line.

From here, the greenway will leave the river and travel north along the Ruth property line approximately 950 linear feet to the Dominion Energy power line easement. There are minimal areas of wetlands that will need to be avoided. There is

what appears to be an old logging road in this section, which could be used as for greenway access. The power line easement will need to be crossed at 90 degrees and back into the woods. At this point, there is substantial topography to traverse to get up to Bush River Road. There is about a 50-foot difference in elevation between the power line easement and the old CSX rail crossing. It will be necessary to traverse the hill side at an angle traveling northwest to assist in meeting ADA requirements. Additionally, switchbacks and some significant grading will be needed to make this section work. The greenway will need to cross the "semi-abandoned" rail line at Bush River Road.

Bush River Road to Lake Murray Dam (8,600LF)

This area of the corridor did not show any signs of wetlands and is mostly owned by Dominion Energy. There is an entrance to a Dominion laydown yard where the greenway will need to cross and continue into the wood line along Bush River Road. Once at Bush River Road, the greenway can follow the road right-of-way within the wood line; the greenway should meander so that there are lines of sight from the roadway for visibility and security.

Hardwood tree within corridor

The topography along this section of the proposed greenway will be the most challenging. Topography ranges from an elevation of 270 down to 208 and back up to 260. The greenway's actual length will need to be a lot longer than anticipated to accommodate ADA access.

The section just west of the Dominion laydown yard will traverse along the contours down into a ravine and back up to the edge of the roadway until it reaches the Dominion McMeekin Station entrance. In the areas along the right-of-way, an existing fence will need to be relocated or extensive grading in SCDOT right-of-way will be required. Either way, the greenway will follow the road right-of-way until after passing a seven-acre parcel owned by EB Atkins. This area may need to have an easement or a Dominion fence relocated.

The greenway will continue west within the wood line to the Lexington County recycling center at the intersection with Coldstream Drive. The greenway will again have to traverse some significant topography, as there is an approximately 16-foot change in elevation. Once at the exit of the recycling center, the greenway will again need to possibly have some switchbacks to address the changes in elevation and meet ADA guidelines. At the entrance to the recycling center there is an opportunity to relocate some existing Dominion fencing to make it easier and safer to cross the entrance driveway.

Once back in the wood line, the topography begins to level off and become more rolling. The greenway should be easier to construct here, as it will be adjacent to the roadway. There are substantial trees of large size that should be showcased but avoided, as to not damage them. As the greenway continues to the Lake Murray Dam and the intersection of SC 6/SC 60, it will most likely transition to an adjacent-to-road shared-use path, eventually tying to the existing concrete sidewalk. Improving the existing sidewalk to a wider, shared-use facility would be ideal. A grade-separated greenway crossing of SC 6 may also be considered.

DEMOGRAPHIC AND SOCIO-ECONOMIC ANALYSIS

The maps, charts, and infographics presented in this section summarize demographic data about residents in proximity to the greenway corridor. Unless otherwise noted, all data comes from the American Community Survey (ACS) 2018 five-year estimate. Numbers may not be exact due to rounding and sampling methods.

Target Area

Figure A.2-1 identifies the target area of the analyses. The area stretches across both Lexington and Richland Counties. This area contains 64 block groups which are either partially or fully located within a two-mile buffer of the proposed Lower Saluda Greenway. Of those 64 block groups, 45 are in Lexington County and 19 are in Richland County. It should be noted that data for two block groups is unavailable as they comprise Lake Murray.

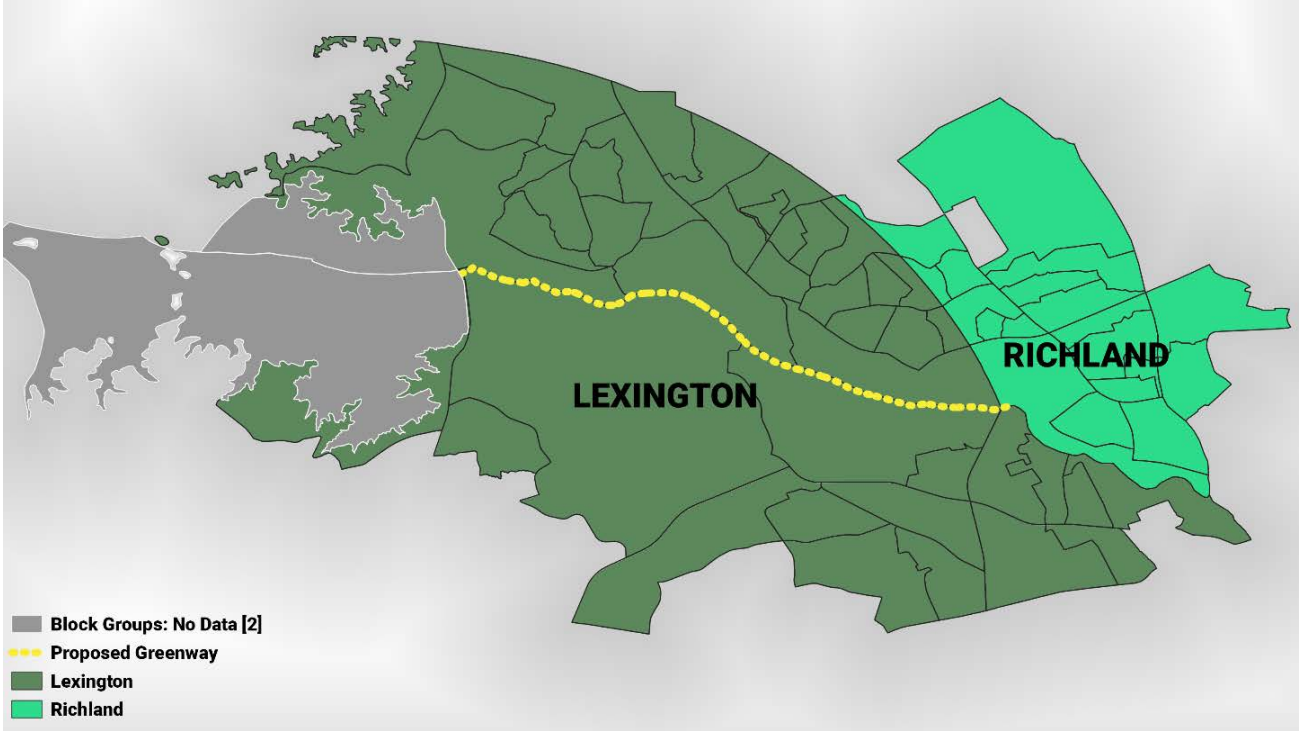


Figure A.2-1 | Target Area

Total Population

The total population of this area is 94,898. **Figure A.2-2** illustrates how the population is distributed, by block group, throughout the target area. Noticeably, bordering the proposed greenway are two of the highest categories of total populations – 1,500 or greater.

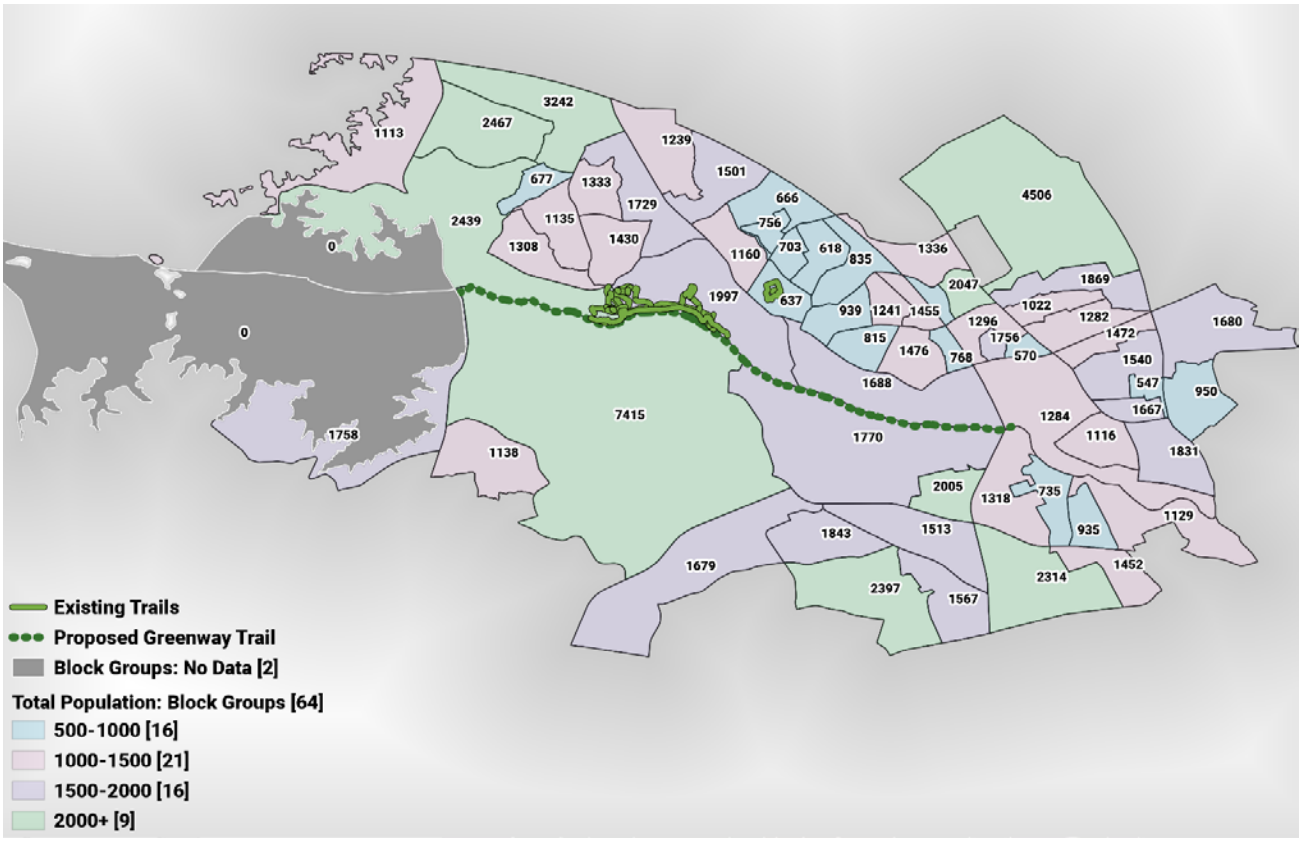


Figure A.2-2 | Population by Block Group

Race

Figure A.2-3 shows that 36 (58%) block groups have a majority composed of individuals that identify as "White Only." Additionally, 26 (42%) have a majority composed of individuals that identify as "Black/African-American Only." These are the two largest race groups within a two-mile buffer of the proposed greenway. All areas bordering the proposed greenway are majority white.

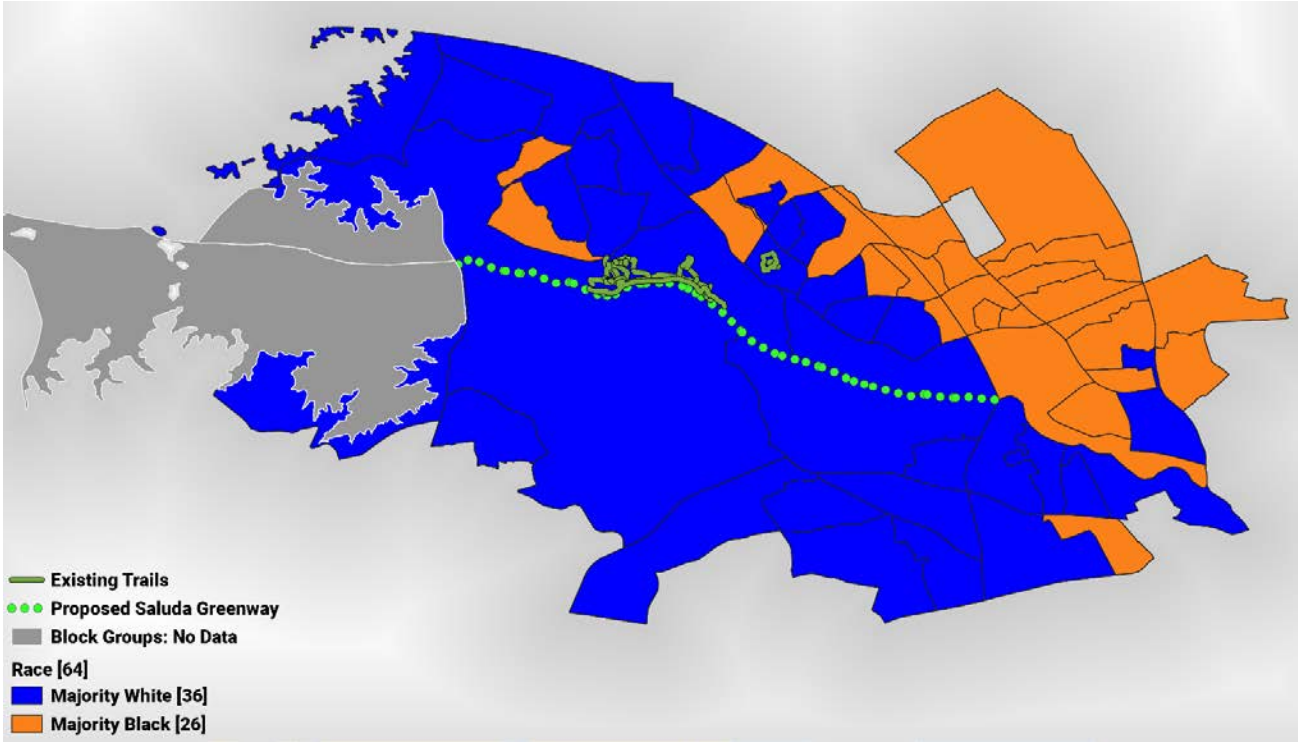


Figure A.2-3 | Race by Block Group

Figure A.2-4 displays the distribution of race throughout the target area. Noticeably, race groups titled "Hawaiian and Other Pacific Islander" and "American Indian/Alaskan Native" represent less than 1% of the population. In total, the largest race group in the area identify as "White Only" (57%) with "Black/African-American Only" being the second largest (30%).

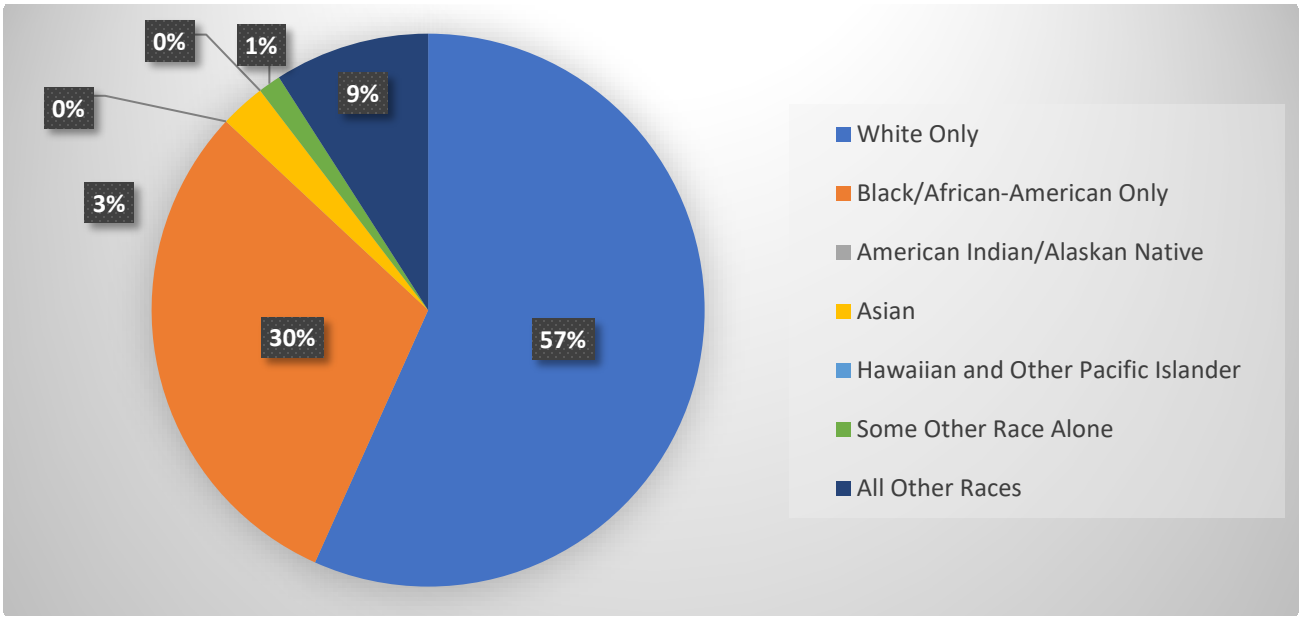


Figure A.2-4 | Race Distribution

Age

As shown in **Figure A.2-5,** individuals age 17 and under make up the majority of 45% of the block groups in this area, making them the largest represented group, in terms of age. Individuals age 65+ represent the majority of 32% of the block groups in this area, making them the second largest. Age groups 18-21 and 60-64 do not make up the majority of any of the block groups.

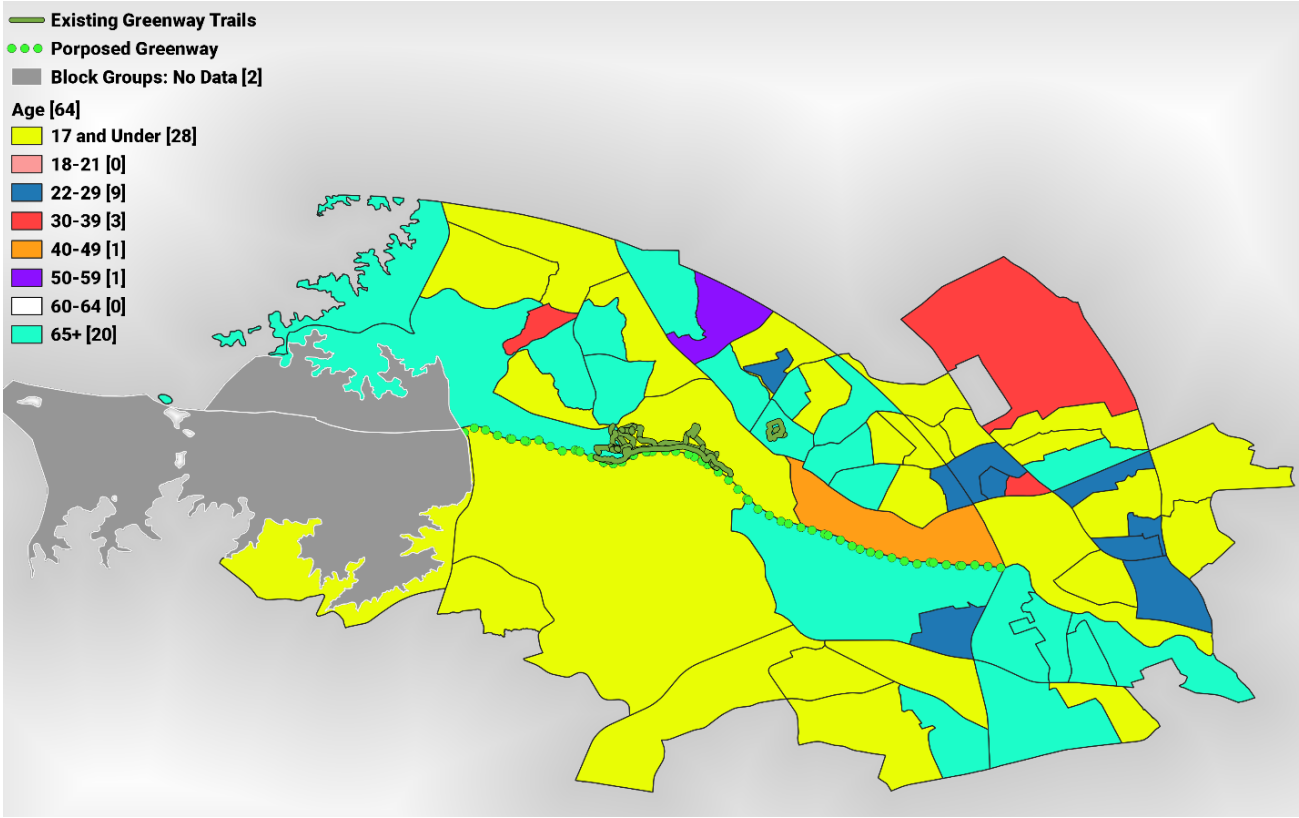


Figure A.2-5 | Age by Block Group

Figure A.2-6 displays the age distribution for the area. The largest age group is 17 and under, with 21% of the population fitting into that category. Those age 65 and older represent the second highest, making up 15.1% of the total population.

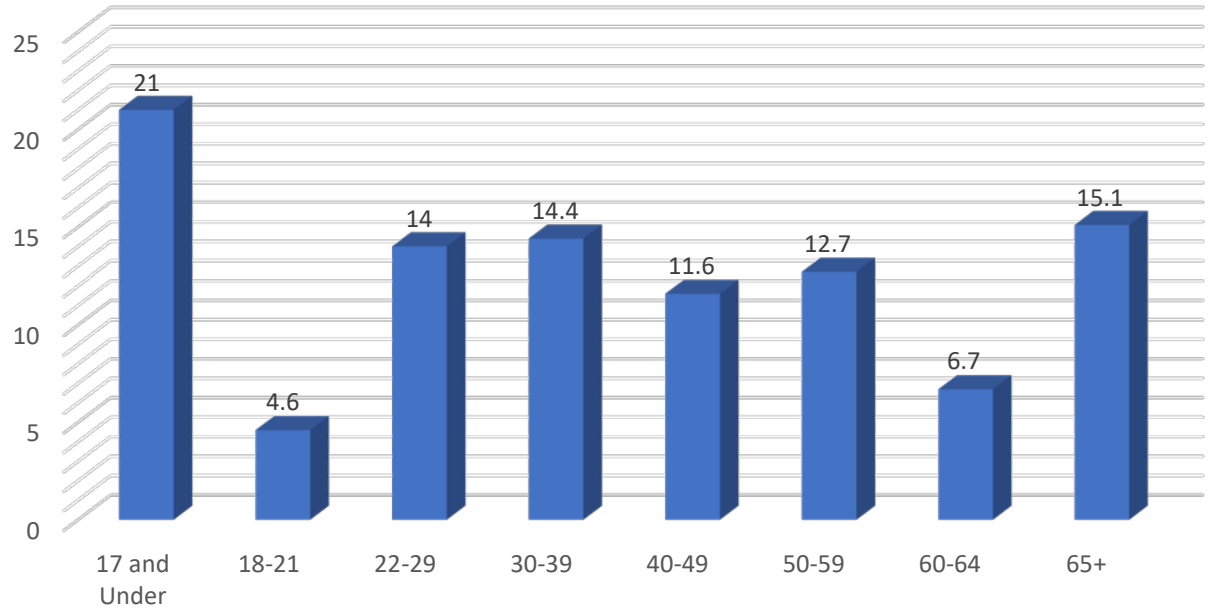


Figure A.2-6 | Age Distribution

Gender

Figure A.2-7 represents the majority gender in the target area as it relates to their individual block groups.

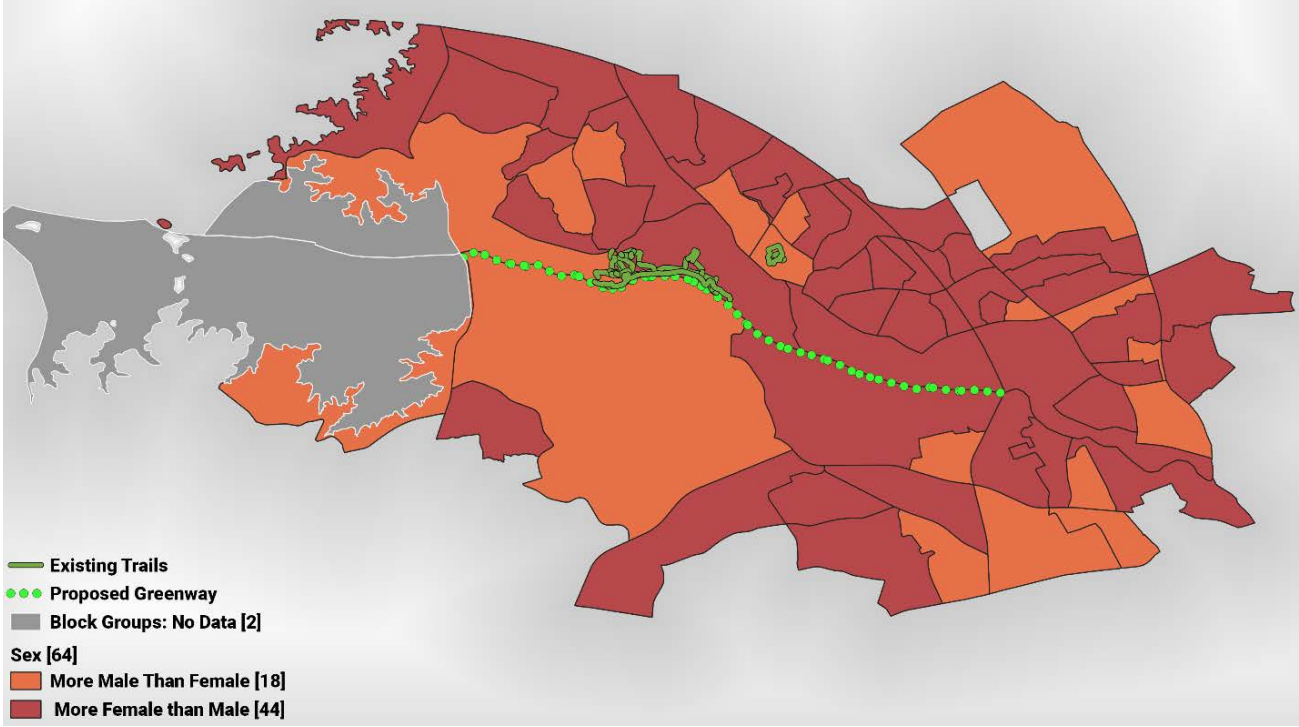


Figure A.2-7 | Gender by Block Group

Figure A.2-8 shows gender distribution. While almost an even split, there are more females than males residing in the two-mile buffer of the proposed greenway. However, if you refer to Figure 2.2-7, you will notice where female-majority only accounts for 14 of the 62 total block groups.

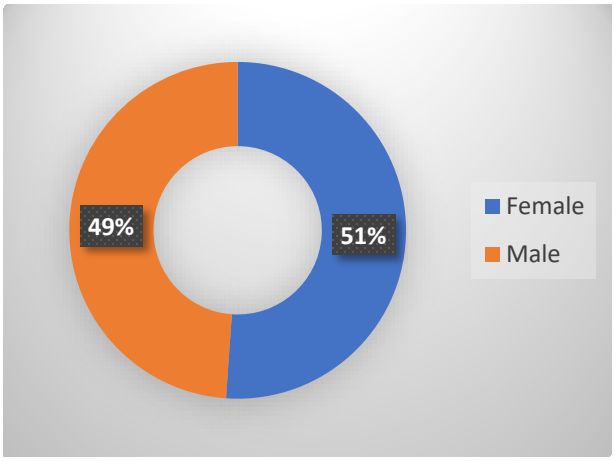


Figure A.2-8 | Gender

Educational Attainment

Figure A.2-9 illustrates the highest level of educational attainment as it relates to the 62 block groups. A majority population of individuals that have acquired "some college" or more is indicative of 68% of the block groups. The largest category between census blocks, for this specific area, are those individuals that have acquired a bachelor's degree.

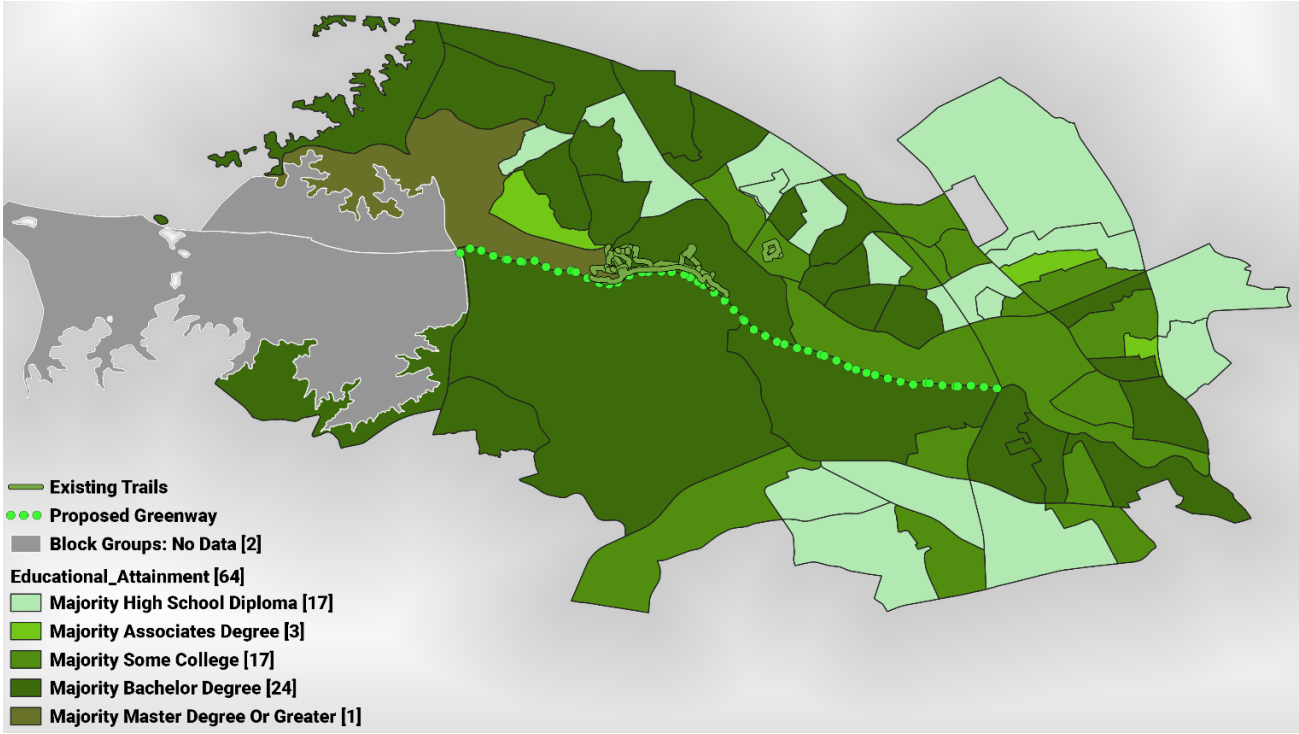


Figure A.2-9 | Educational Attainment by Block Group

Figure A.2-10 illustrates the percentage of individuals based off their highest level of educational attainment. Remarkably, 65% of the population has attended some institution of higher learning, with 25% of those individuals having acquired their bachelors and 16% a master's degree or greater.

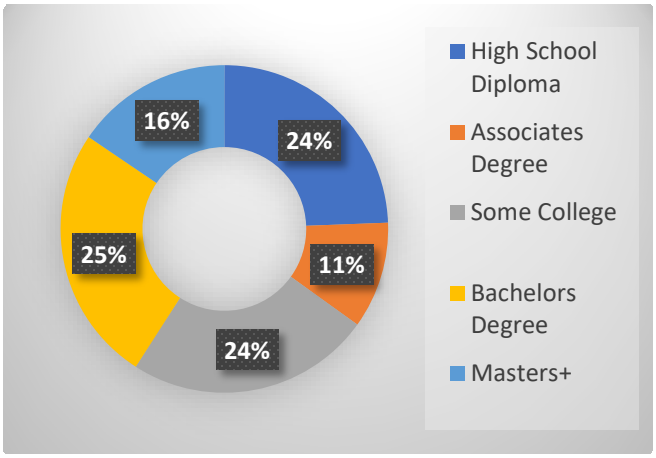


Figure A.2-10 | Educational Attainment

Employment Status

As depicted in **Figure A.2-11**, 84% of block groups have a majority population of 20% or more individuals currently not in the labor force. There are many reasons why an individual may not be in the labor force, including active students, retirement, disability, and unemployment.

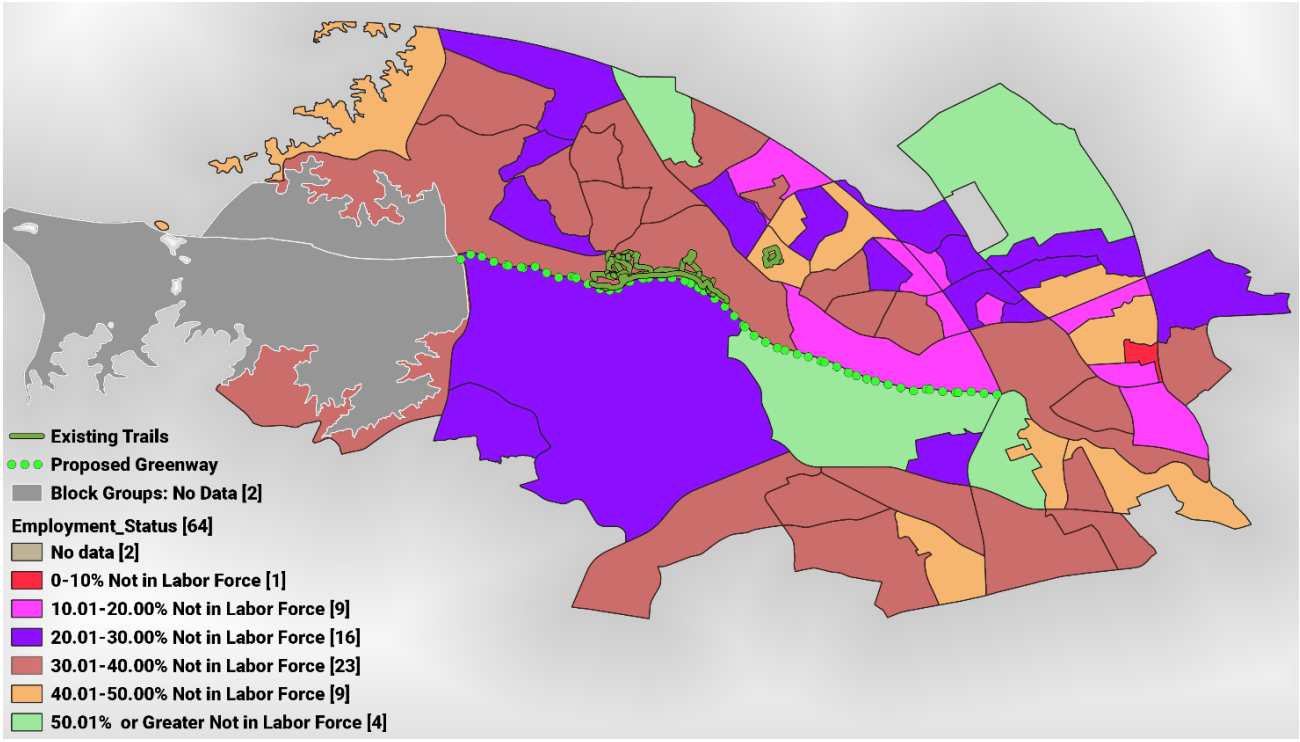


Figure A.2-11 | Employment Status by Block Group

Figure A.2-12 shows the overall employment status of all individuals in the labor force. Noticeably, 36% of individuals residing in the study area are not in the labor force.

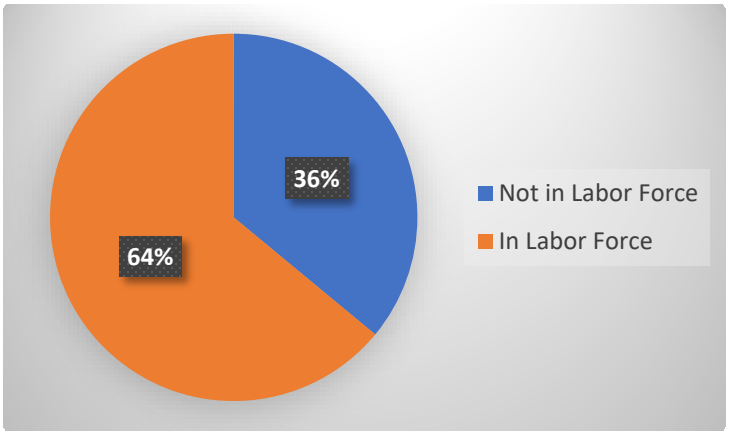


Figure A.2-12 | Employment Status

Household Income

As shown in **Figure A.2-13,** more than half of the census blocks have households earning more than $75,000 a year; 77% of census blocks have reported majority earnings of $50,000 and greater. Additionally, all census blocks that border the proposed greenway have household incomes greater than $50,000.

Map 8: Household Income

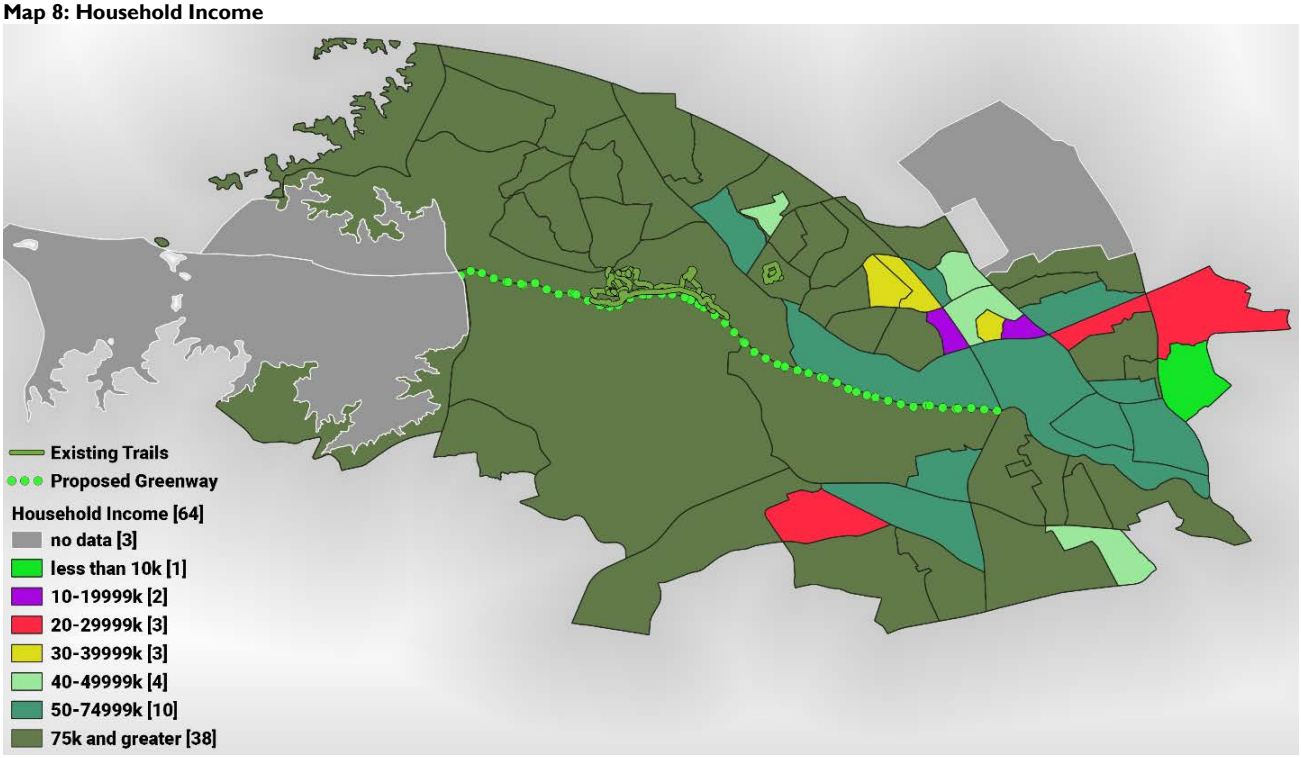


Figure A.2-13 | Household Income by Block Group

Figure A.2-14 illustrates the distribution of household income throughout the study area. The highest earning category in the study area are households earning $75,000 or more (34%), followed by households earning $50,000 or more (20%).

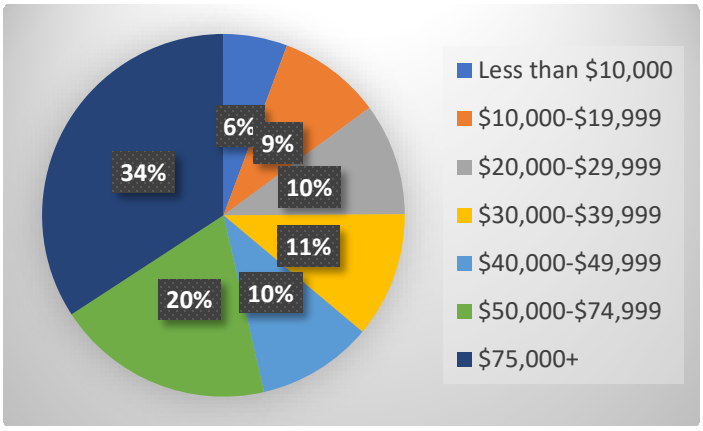


Figure A.2-14 | Household Income

Zero and One Vehicle Households

Figure A.2-15 illustrates the percent of households with access to either zero or one vehicle. Notably, more than half (34) of the 62 block groups have more than 40% of their households with access to zero and one vehicle. Areas with a low rate of vehicle accessibility may require other forms of transportation. These areas may need to be connected directly to the greenway, while homes with more cars can be serviced by trailheads with parking.

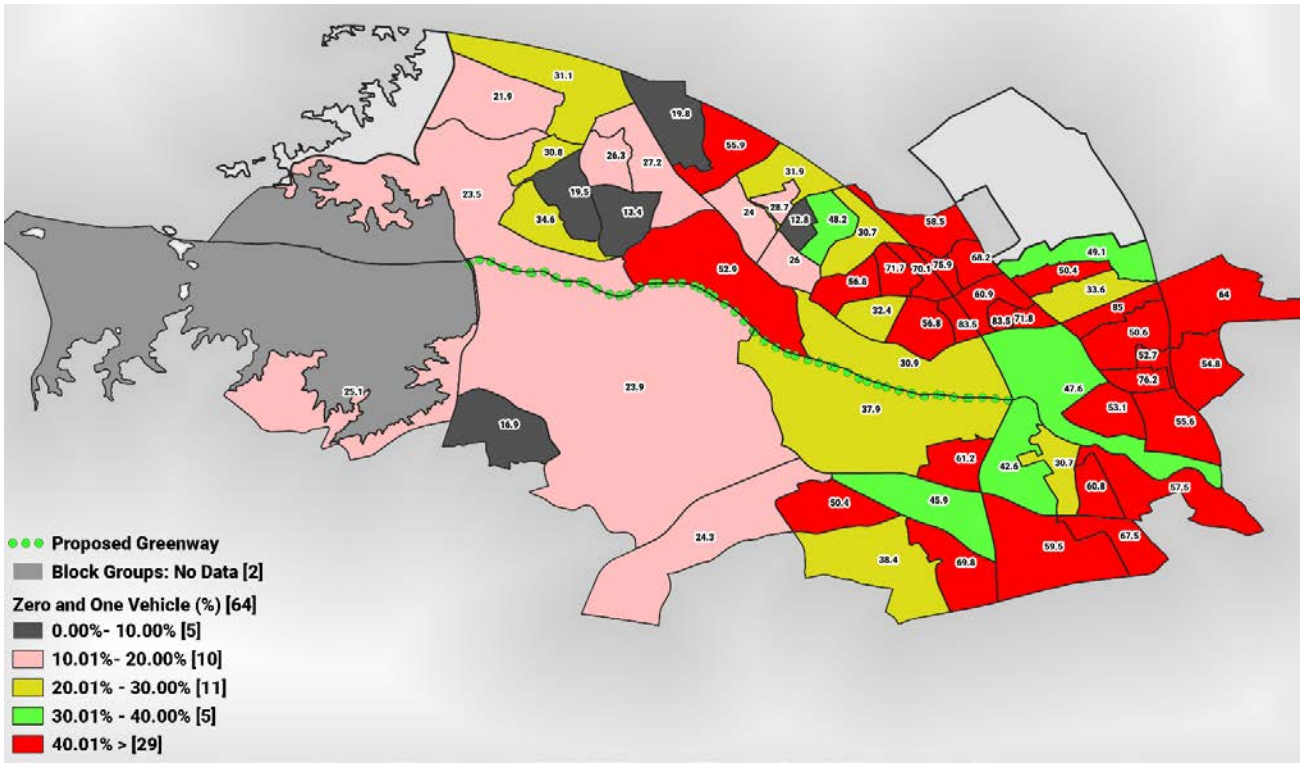


Figure A.2-15 | Zero-One Vehicle Households by Block Group

As displayed in **Figure 2.2-16**, 46% of total households have access to zero or one vehicle.

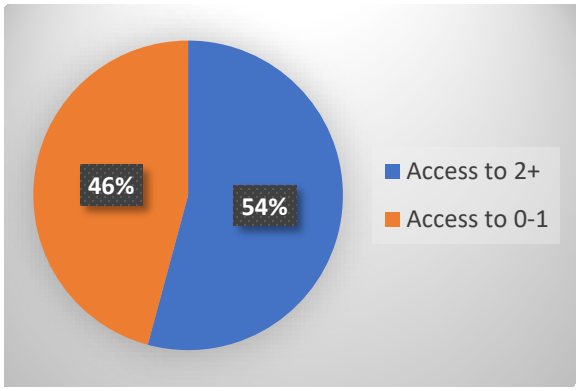
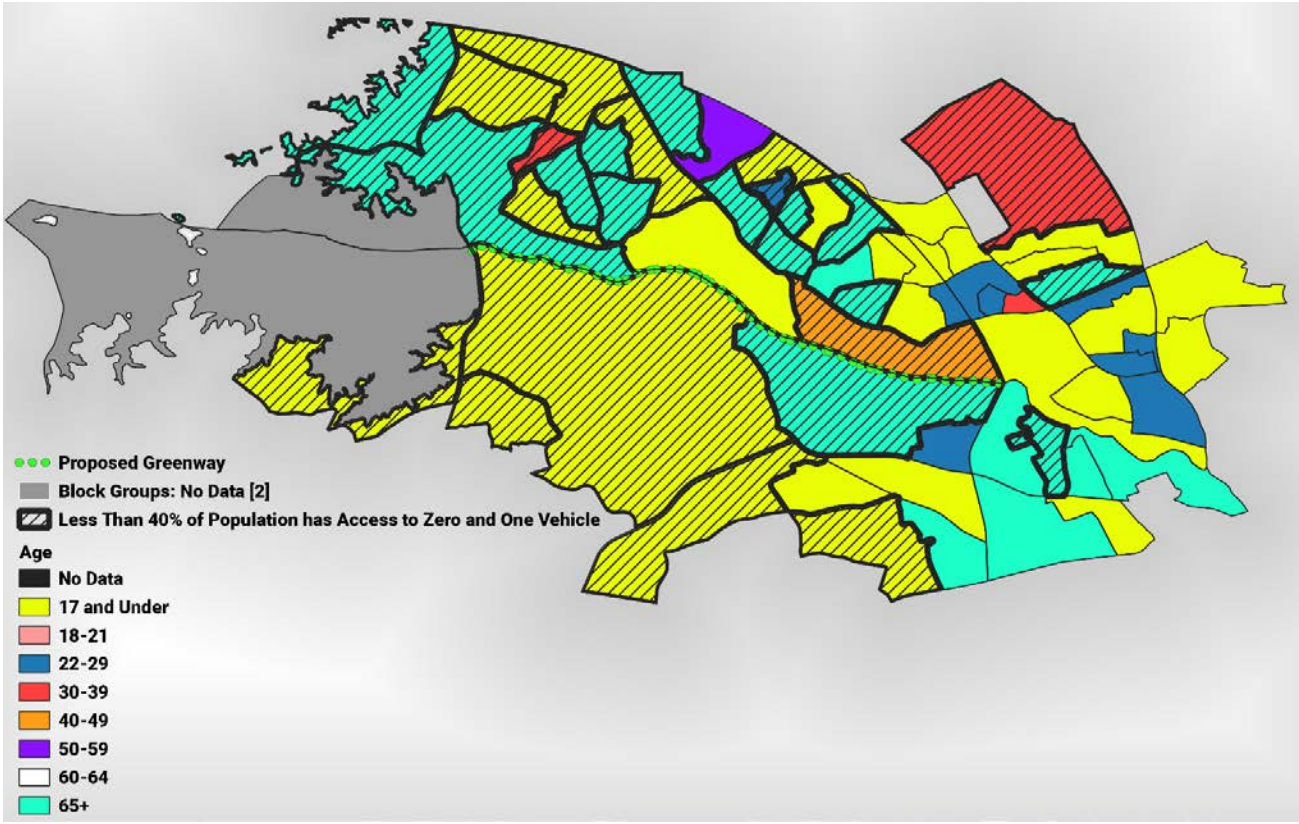


Figure A.2-16 | Zero-One Vehicle Households

Age and Vehicle Accessibility

Figure A.2-17 displays the block groups, based on the age of the majority population, which have less than 40% access to zero and one vehicle. All but one of the areas bordering the proposed greenway has limited access to more than one vehicle.



* This map provides two key indicators by block group: age and vehicle accessibility. Where both indicators exist, there is not necessarily a direct correlation between the indicators, but it does show that more than one key indicator is present.

Figure A.2-17 | Age and Vehicle Accessibility

Travel Time to Work

As shown in **Figure A.2-18**, most people (66%) residing in the target area, spend about 10-29 mins commuting to work.

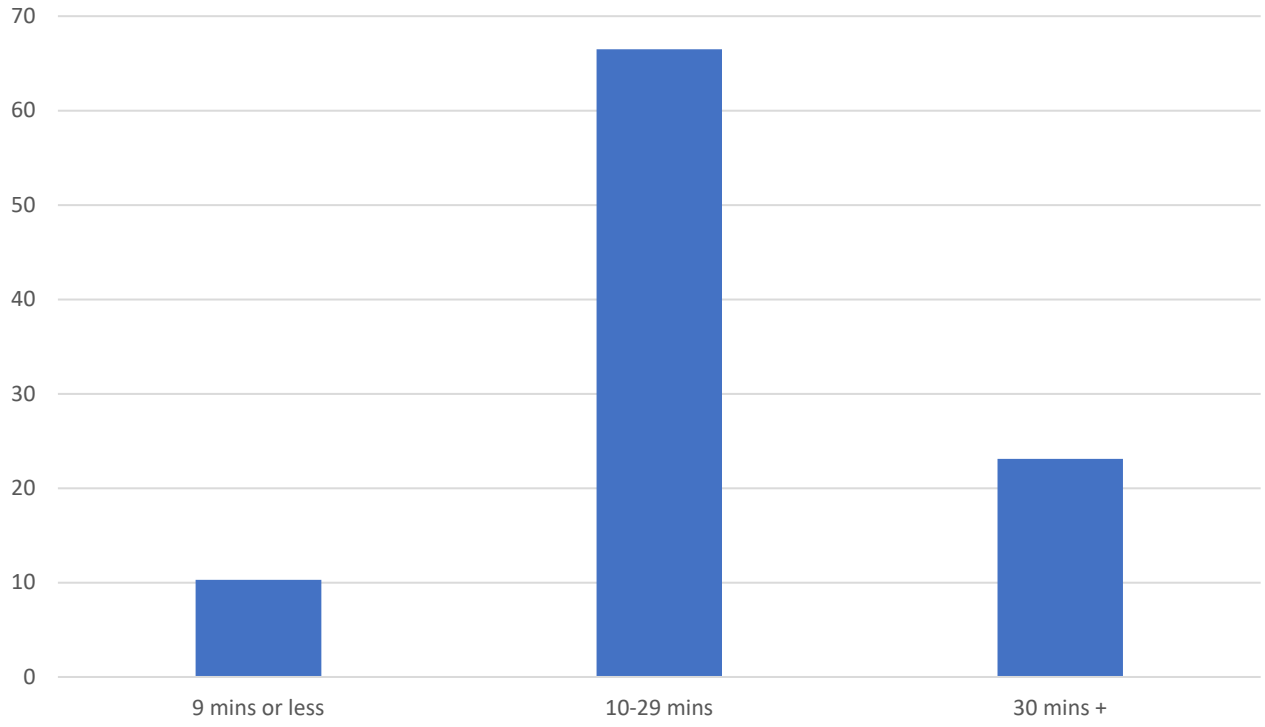


Figure A.2-18 | Travel Time to Work

Means to Work

As shown in **Figure A.2-19**, 90% of commuters utilize a private automobile as their primary means of transportation. Noticeably, zero residents report using a bicycle. The second largest category of commuters are those who telecommute.

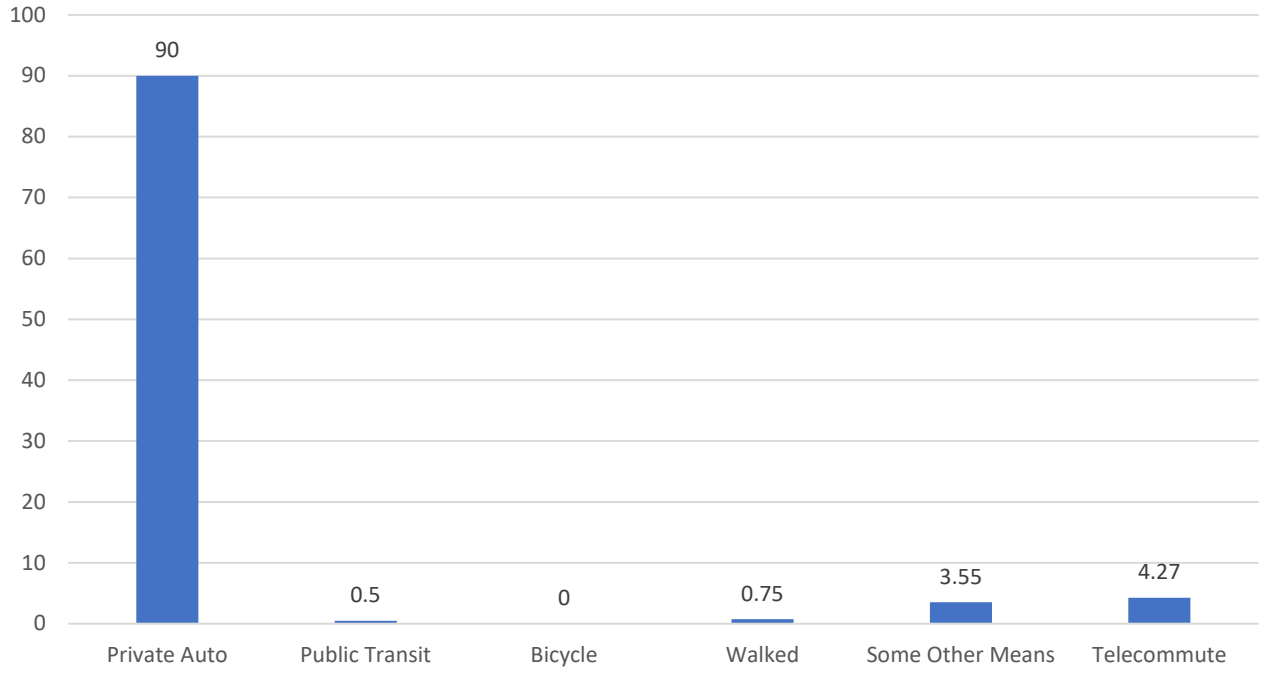


Figure A.2-19 | Means to Work

Poverty

Poverty Rate

According to the U.S. Census Bureau, as of 2017, the nation's official poverty rate was 11.8% and the State of South Carolina's was 15.3%. The target area has an overall poverty rate of 13.2%, which is 2.1% less than the state average.

Figure A.2-20 illustrates the distribution of poverty rates. Twenty-eight (45%) of the 62 block groups have a poverty rate higher than the national average, and 20 (32%) have rates higher than the state's average. There are no census blocks with a poverty rate higher than 11.7%, bordering the proposed greenway.

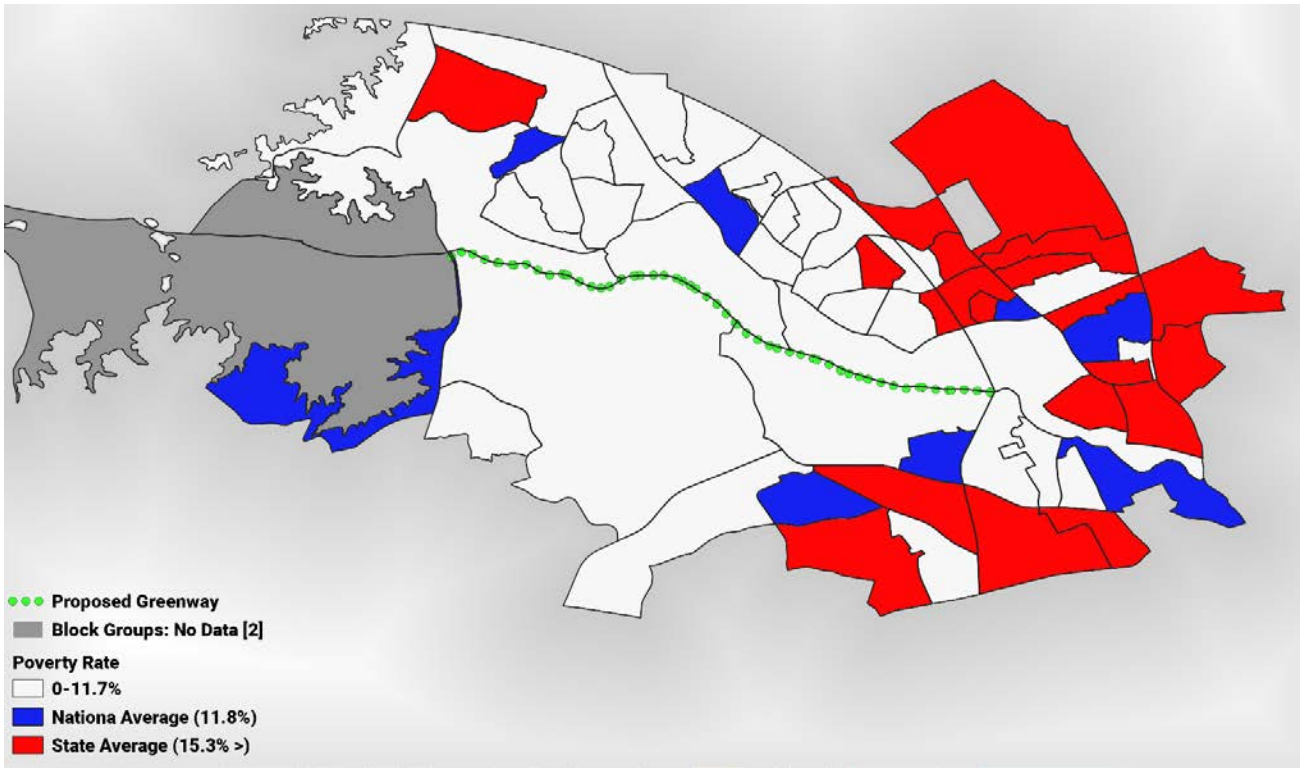
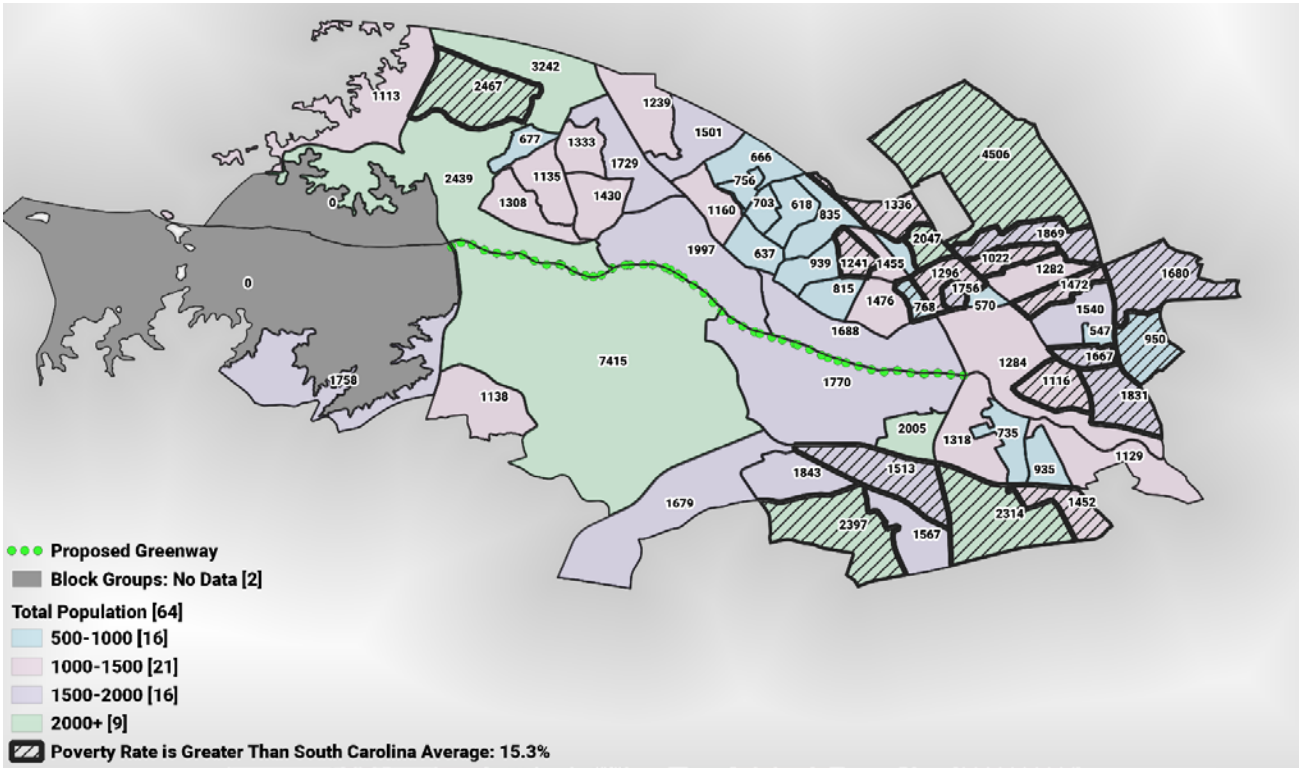


Figure A.2-20 | Poverty Rate by Block Group

Poverty and Total Population

Figure A.2-21 shows block groups, based on the total population, which have a poverty rate greater than the state's average of 15.3%. Of the 20 impoverished areas, four (20%) have a total population greater than 2,000.

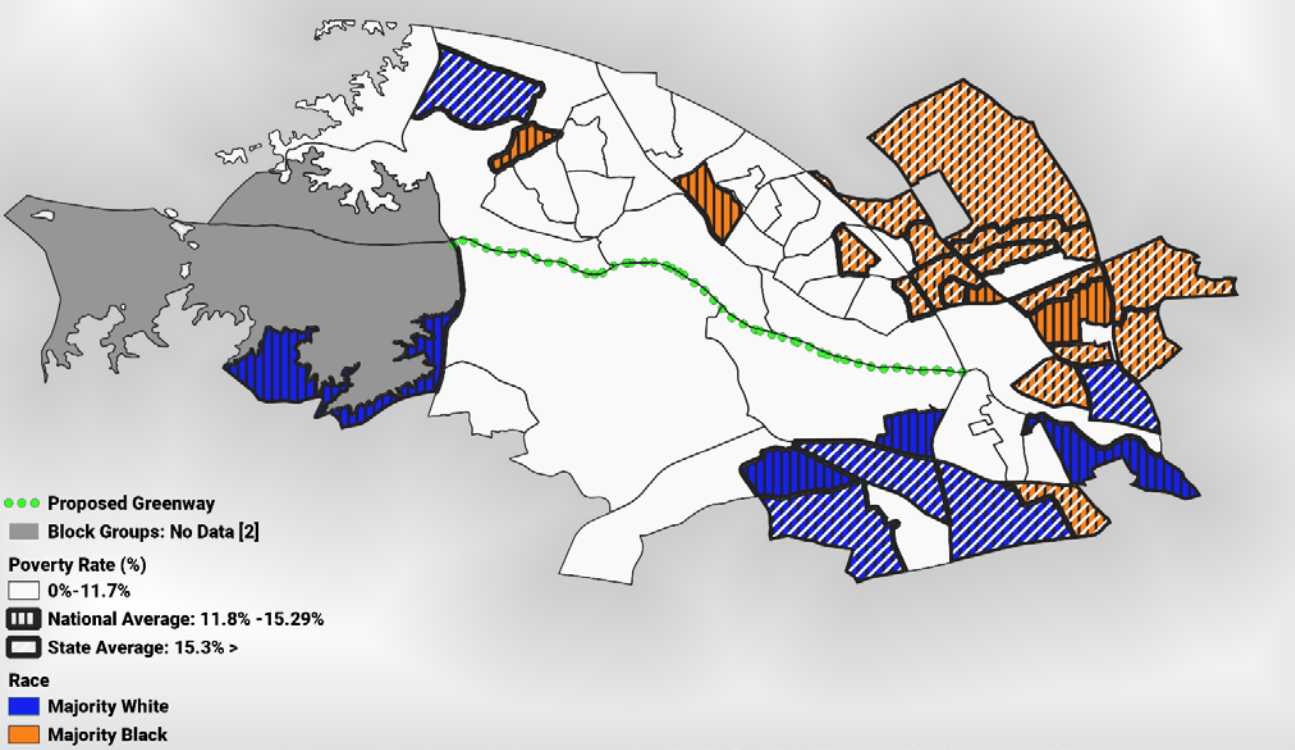


* This map provides two key indicators by block group: poverty and total population. Where both indicators exist, there is not necessarily a direct correlation between the indicators, but it does show that more than one key indicator is present.

Figure A.2-21 | Poverty and Population by Block Group

Poverty and Race

Figure A.2-22 displays the block groups, based on the race of the majority population, with a poverty rate greater than the national and state average. Of the 26 impoverished areas, 9 (35%) are majority "White Only" and 17 (65%) are majority "Black/African-American Only." Additionally, five (19%) of the census blocks with a poverty rate that either equals or exceeds 11.8%, contain a majority "White Only" population; 13 (50%) of the census blocks, based on the same criteria, are "Black/African-American Only."

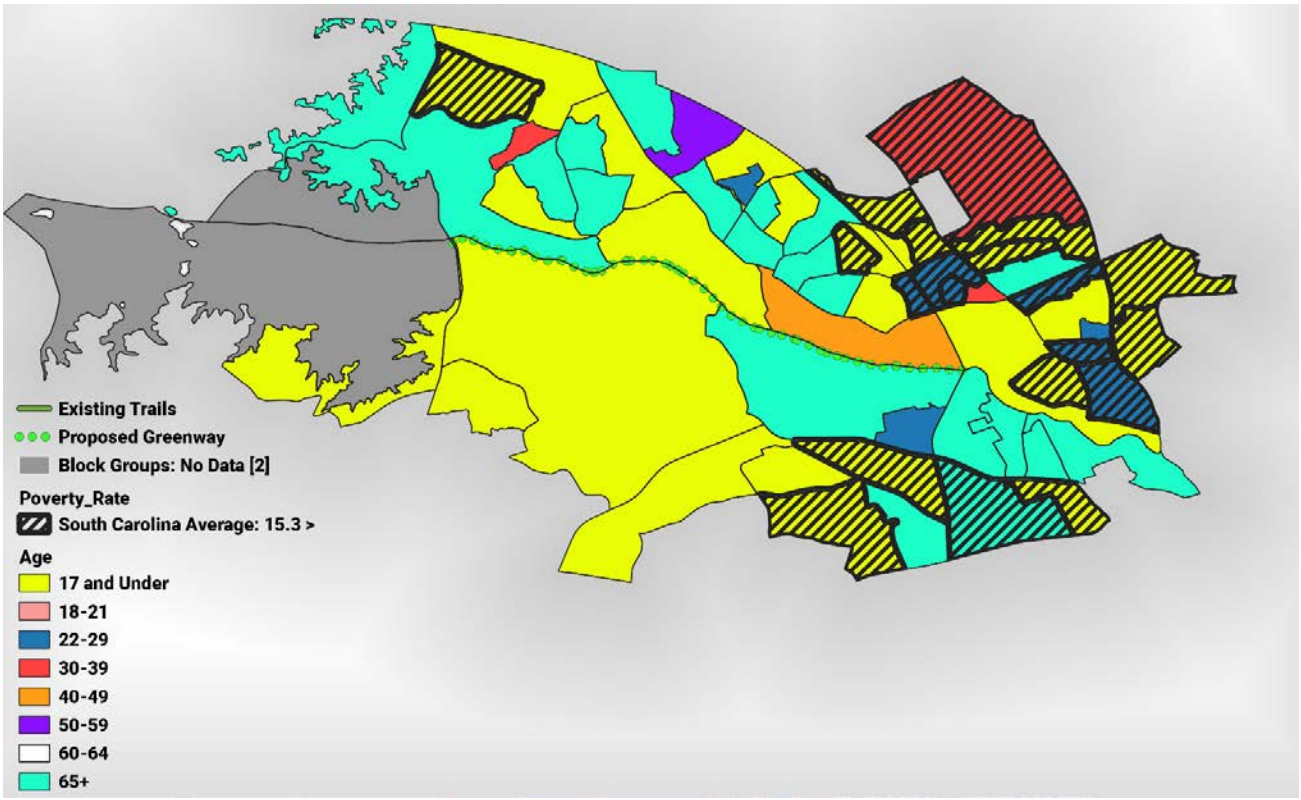


* This map provides two key indicators by block group: poverty and race. Where both indicators exist, there is not necessarily a direct correlation between the indicators, but it does show that more than one key indicator is present.

Figure A.2-22 | Poverty and Race by Block Group

Poverty and Age

Figure A.2-23 displays the block groups, based on the age of the majority population, which has a poverty rate greater than the state's average of 15.3%. Noticeably, of the 20 areas that fit the criteria, 12 (60%) have a majority population that is 17 years and under. Areas, that have a majority population that is 65 years and older represent only one block group with a poverty rate equal to or exceeding the state's average.

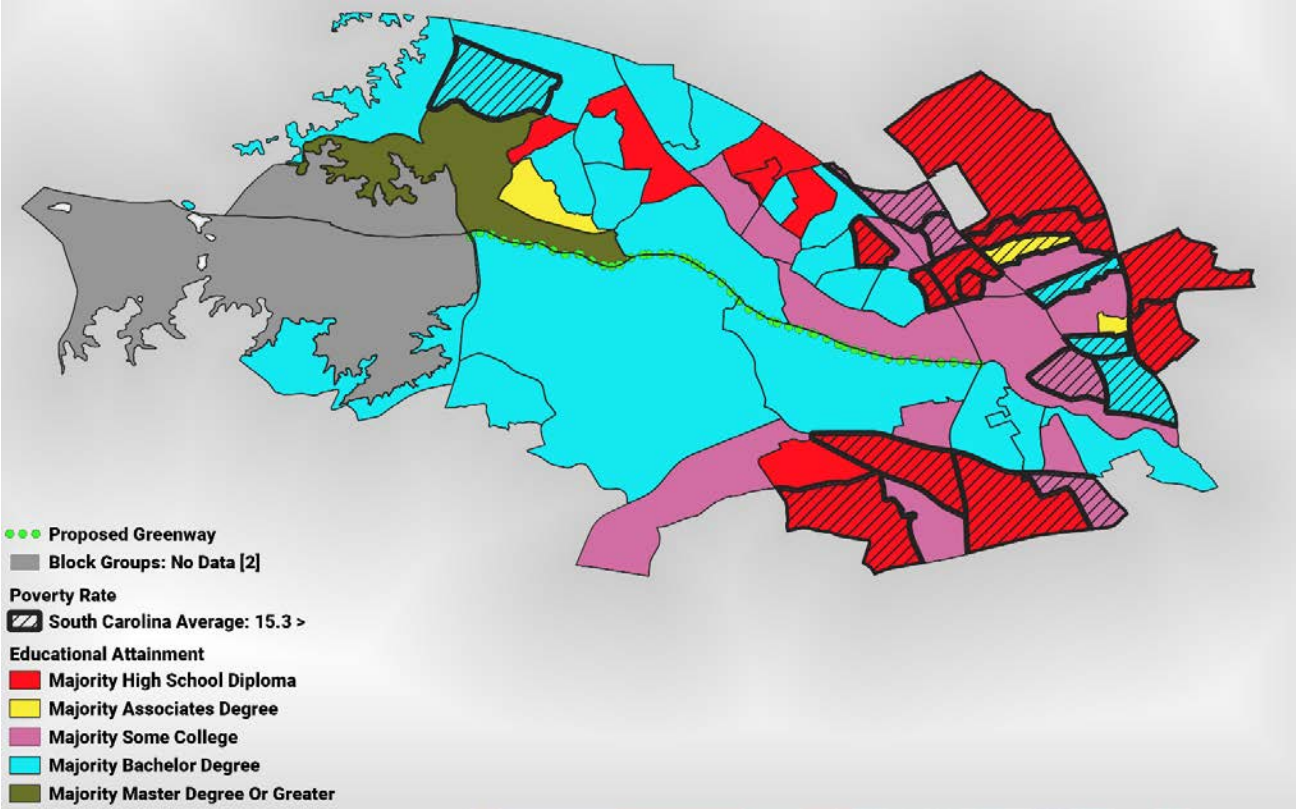


* This map provides two key indicators by block group: poverty and age. Where both indicators exist, there is not necessarily a direct correlation between the indicators, but it does show that more than one key indicator is present.

Figure A.2-23 | Poverty and Age by Block Group

Poverty and Educational Attainment

Figure A.2-24 shows the block groups, based on the level of educational attainment of the majority population, which have a poverty rate greater than the state's average of 15.3%. Of the 20 impoverished areas, 4 (20%) have a majority population of individuals that have earned no more than a bachelor's degree, and 16 (80%) have a majority population of individuals that have earned no more than either a high school diploma or equivalent or associates degree.

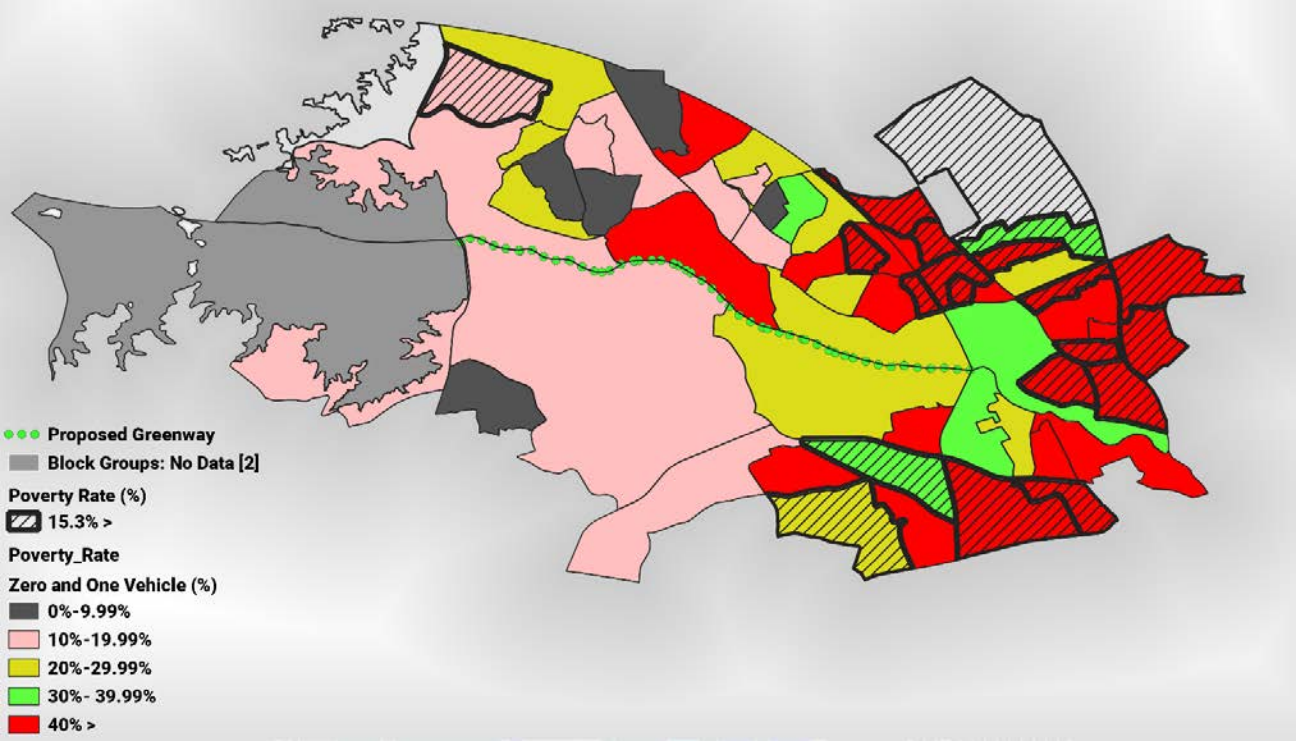


* This map provides two key indicators by block group: poverty and educational attainment. Where both indicators exist, there is not necessarily a direct correlation between the indicators, but it does show that more than one key indicator is present.

Figure A.2-24 | Poverty and Educational Attainment by Block Group

Poverty and Vehicle Accessibility

Figure A.2-25 displays the block groups, based on access to zero or one vehicle, with majority population having a poverty rate greater than the state's average of 15.3%. Of the 20 census blocks in this area, with a poverty rate higher than the 15.3%, 15 (75%) have limited access (0-39.99%) to a vehicle and 5 (25%) have increased access (40% and greater) to a vehicle. Notably, none of these areas border the proposed greenway.



* This map provides two key indicators by block group: poverty and vehicle accessibility. Where both indicators exist, there is not necessarily a direct correlation between the indicators, but it does show that more than one key indicator is present.

Figure A.2-25 | Poverty and Vehicle Accessibility by Block Group

CULTURAL RESOURCES SCREENING

Construction of the Lower Saluda Greenway may involve federal funds and will require federal and state permits related to stormwater management, water quality, and use of navigable waterways. Therefore, it is necessary to consider the effect that the permitted action may have on historic properties (i.e., sites, buildings, structures, objects, and districts eligible for or listed on the National Register of Historic Places (NRHP)) and significant historical or archaeological sites. A summary of the known cultural resources (i.e., historic properties, archaeological sites, historical above-ground resources) along and near the greenway corridor follows.

The ArchSite online database of archaeological and historical sites maintained by the SC Department of Archives and History (SCDAH) and the University of South Carolina's SC Institute of Archaeology and Anthropology (SCIAA) were reviewed to determine if known historical and archaeological resources lie within and near the alignment of the proposed greenway. This review also identified areas that witnessed previous cultural resources survey. Historical maps of the region were also reviewed to identify potential historic sites. Aerial photographs (through Google Earth) were inspected and the GIS systems of Lexington and Richland Counties were used to obtain information related to current terrain and local conditions that may affect the integrity of archaeological or historical sites. Photographs taken during the April 2020 field analysis of the proposed greenway alignment were also reviewed.

There is one archaeological site (38LX116) through which the greenway corridor traverses. This site is not eligible for the NRHP. There are two historic sites (i.e., the Saluda Dam and Powerhouse Resource 243 0127 and Selwood Resource 243 0126) near the western terminus of the proposed greenway. The SC State Historic Preservation Office (SHPO) determined these resources eligible for the NRHP. There are several areas along the corridor where buried archaeological deposits may be present as well. Given the shallow nature of the ground disturbance associated with the construction of the proposed greenway and its recreational use, it is unlikely that the greenway will affect any historic properties adversely.

ENVIRONMENTAL SCREENING

This section provides a planning level of detail for the following resource areas: NEPA documentation; endangered species; acquisitions/displacements; streams/wetlands and associated mitigation; 4(f)/6(f); scenic rivers; environmental justice; water quality; floodplains; hazardous materials; farmlands; air quality; noise; and environmental permitting. The level of detail is intended to identify areas where further study would likely be necessary during the design and construction phases of the project.

Endangered Species

The purpose of the Endangered Species Act (ESA) is to protect and recover imperiled species and the ecosystems upon which they depend. The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) administer the ESA. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife. Under the ESA, species may be listed as threatened or endangered. Threatened (T) means a species is likely to become endangered within the foreseeable future. Endangered (E) means a species is in danger of extinction throughout all or a significant portion of its range. Under the ESA, individual species and their habitat are protected. Although protection under the ESA is no longer needed for the Bald Eagle, federal protection still exists for it under the Bald and Golden Eagle Protection Act (BGEPA).

A list of the threatened, endangered, and proposed species, and designated critical habitat that could occur on the project site was obtained from the USFWS Information for Planning and Conservation (IPaC) online planning tool on April 26, 2020. **Table A.4-1** depicts the species listed as potentially occurring within counties that the project is in, along with their designated federal status.

Following the review of the potential suitable habitat requirements, field observations were made on April 27-29, 2020 and August 19, 2020 for suitable habitat of federally listed species. During the field walk, plant communities and habitats were observed and noted to determine if they matched habitat types where the listed species have the potential to occur.

Effect determinations based on USFWS standard language implemented for Section 7 Consultation are listed below in order of priority from least to most severe.

- No Effect – will not affect a listed species or designated critical habitat.
- May affect, not likely to adversely affect – effects on listed species are expected to be discountable, insignificant, or completely beneficial.
- May Effect, likely to adversely affect – may pose any effects on listed species or designated critical habitat.

Table A.4-1 | Species List based on IPaC
(Species list verified on IPaC October 2020)

LISTED SPECIES	HABITAT DESCRIPTION	ANTICIPATED BIOLOGICAL CONCLUSION	FEDERAL STATUS
American wood stork (*Mycteria americana*)	Open water and freshwater and estuarine wetlands which are inundated throughout nesting season (February through September).	No Effect	Threatened
Bald eagle (*Haliaeetus leucocephalus*)	Nests in large, mature live pine or cypress trees near water.	N/A*	BGEPA
Shortnose sturgeon (*Acipencer brevirostrum*)	Occur in 41 bays and rivers along the East Coast, reproducing in 19 of them. They are born in freshwater, then live in their birth river, make short feeding or migratory trips into salt water, and then return to freshwater to feed and escape predation.	No Effect	Endangered
Red-cockaded woodpecker (*Picoides borealis*)	Old growth pine forest with open understory.	No Effect	Endangered
Smooth Coneflower (*Echinacea laevigata*)	Cedar barrens, clearcuts, open woods, glades, roadsides, dry limestone bluffs, and right-of-ways with soils that are rich in calcium and magnesium and are associated with diabase and/or marble.	No Effect	Endangered
Canby's dropwort (*Oxypolis canbyi*)	Pond cypress savannas, shallows and edges of cypress/pond pine sloughs, and wet pine savannas on the Coastal Plain.	No Effect	Endangered
Rough-leaved loosestrife (*Lysimachia asperulaefolia*)	Ecotones or edges between fire-maintained longleaf pine uplands and pond pine pocosins	No Effect	Endangered

**No project affect determination required as the species does not require Section 7 consultation.*

SC Department of Natural Resource's Heritage Trust Database identifies an occurrence of a Bald Eagle nest approximately one mile south of the Lake Murray Dam. This occurrence was documented in 2004. However, recent studies[1] indicate that this nest may no longer be active. These findings are preliminary in nature and surveys may need to be conducted during appropriate survey windows in the National Environmental Policy Act (NEPA) phase.

Acquisitions/Displacements

Acquisition of property or an easement is anticipated for the project corridor. The acquisition would not result in the relocation or displacement of any commercial or residential establishments. The project corridor would be acquired in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

Streams/Wetlands

The greenway corridor was evaluated for the presence of potential jurisdictional streams and wetlands during site walks on April 27-29, 2020 and August 19, 2020. One goal of the greenway route includes avoiding and minimizing stream and wetland impacts to the greatest degree practicable. The site walk revealed nine potential stream crossings and 10 potential wetland areas (see **Figures A.4-1**, **A.4-2**, and **A.4-3**). These findings have not been verified by the U.S. Army Corps of Engineers (USACE). A USACE Jurisdictional Determination Request will be completed and the extent of USACE jurisdiction verified during the NEPA phase of this project.

[1] Carolina Crossroads Final Environmental Impact Statement, Appendix L – Natural Resources Technical Report, 5/2019

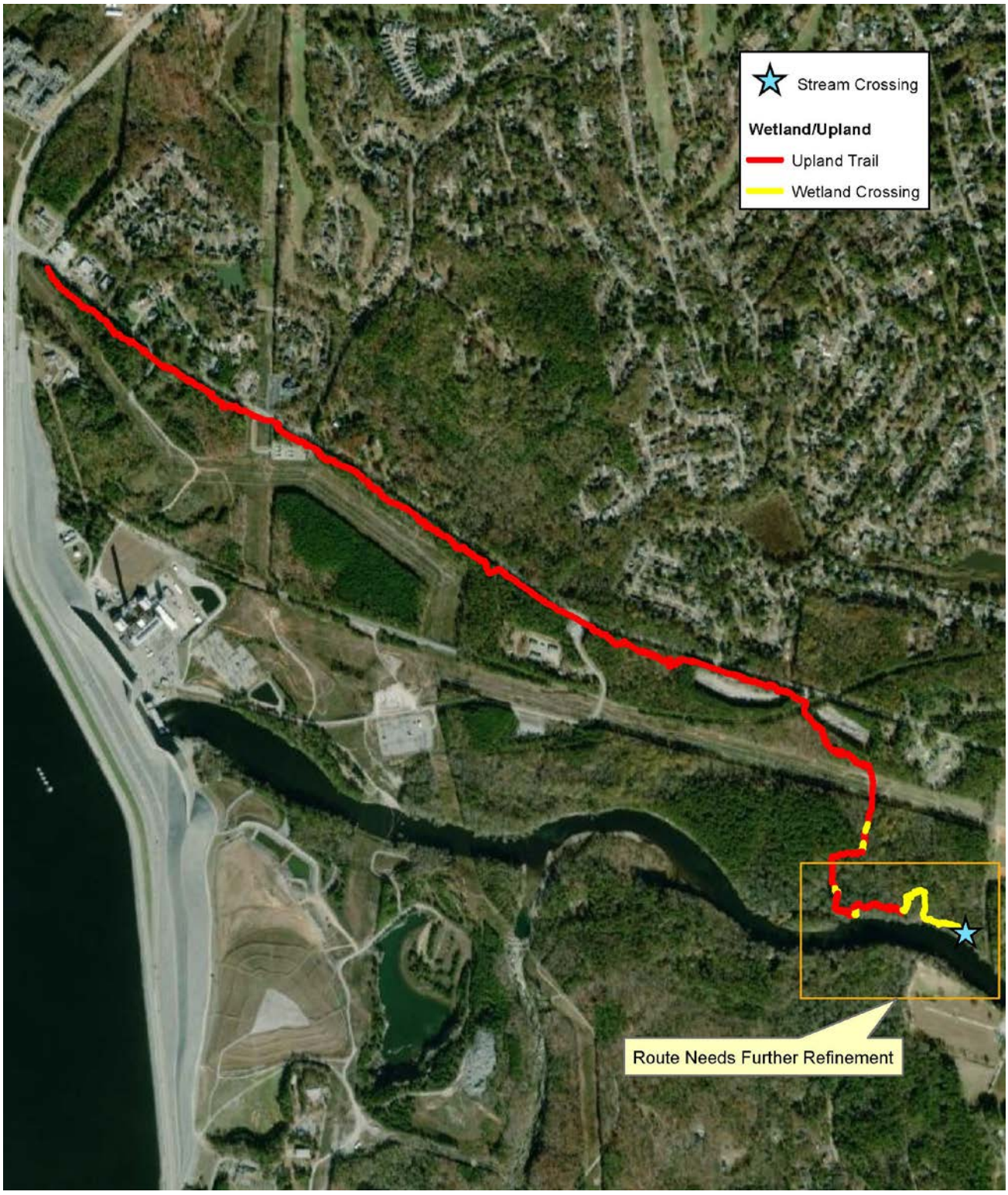


Figure A.4-1 | Wetland and Stream Crossings (Upper)

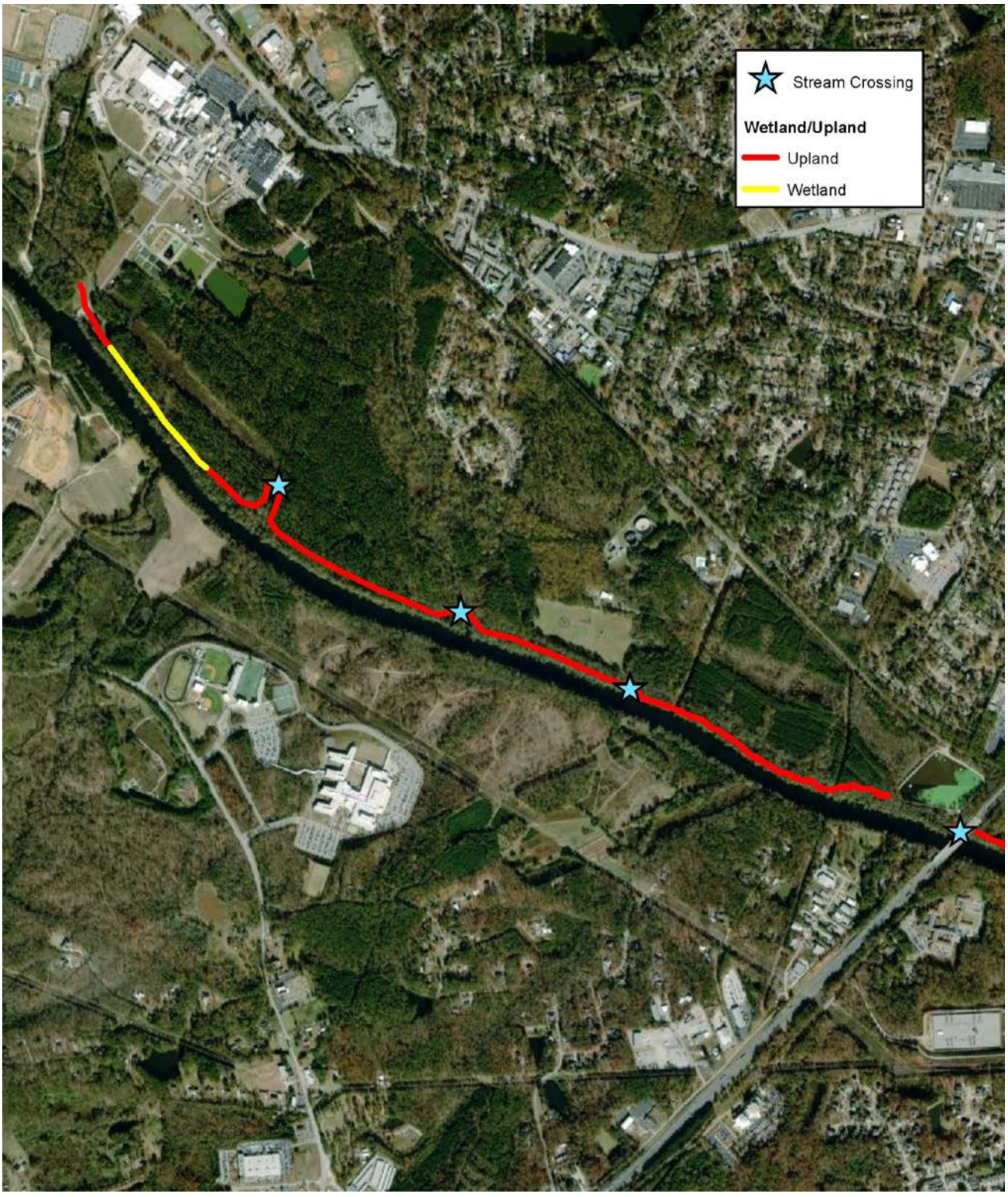


Figure A.4-2 | Wetland and Stream Crossings (Middle)

Figure A.4-3 | Wetland and Stream Crossings (Lower)

Section 4(f)/6(f)

Section 4(f) of the Department of Transportation Act of 1966 specifies that the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites cannot be approved by the Federal Highway Administration unless: 1) there are no existing feasible and prudent alternatives to the use of the land; and 2) the proposed action includes all possible planning to minimize harm to the property.[2]

For the statute to apply to a proposed project the following four conditions must all be true:[3]

1. The project must require an approval from FHWA in order to proceed;
2. The project must be a transportation project;
3. The project must require the use of land from a property protected by Section 4(f) (*See* 23 U.S.C. § 138(a) and 49 U.S.C. § 303(a)); and
4. None of the regulatory applicability rules or exceptions applies (*See* 23 CFR 774.11 and 13).

Examples of the types of proposed situations where Section 4(f) would not apply include, but are not limited to:

1. A transportation project being constructed solely using State or local funds and not requiring FHWA approval.
2. A project intended to address a purpose that is unrelated to the movement of people, goods, and services from one place to another (i.e., a purpose that is not a transportation purpose).
3. A project to be located adjacent to a Section 4(f) property, causing only minor proximity impacts to the Section 4(f) property (i.e., no constructive use).
4. A project that will use land from a privately owned park, recreation area, or refuge.

[2] U.S. Federal Highway Administration, *Environmental Review Toolkit, Section 4(f),* Accessed March 2019 from https://www.environment.fhwa.dot.gov/legislation/section4f.aspx

[3] https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx#apply

If funding is planned from FHWA, Section 4(f) of the Department of Transportation Act may be applicable. Saluda Shoals Park, operated by Irmo Chapin Recreation Commission and located on property owned by Dominion Energy South Carolina, is a 4(f) resource. Additionally, construction of this project should result in establishment of a facility which may receive 4(f) considerations.

Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 was established to provide funding to government agencies for the purchase of land and water resources as well as related easements. A provision of Section 6(f) prohibits the conversion of property acquired or developed with LWCF funding to non-recreational purposes without approval from the National Park Service.

In 1994, Irmo Chapin Recreation Commission (ICRC) received $219,320 from the LWCF for the Saluda Shoals Park and $79,750 in 2001 for the Saluda Shoals Greenway Trail. This proposed project travels through, to, and from the park and it is likely that it ties into the previous greenway grant project. However, there is no conversion, acquisition, or change in the use of the property – it will remain in recreation use. This could be interpreted as no 6(f) issue. If it is interpreted as 'use' of a 6(f) property, coordination with the National Parks Service will be necessary.

Scenic Rivers

The Lower Saluda River is not listed as a National Wild and Scenic River. The reach from one mile below Lake Murray Dam to the confluence with the Broad River is listed on the Nationwide Rivers Inventory (i.e., an NRI River) and is listed as a State Scenic River (1991). The attributes that qualified the Lower Saluda River as a State Scenic River (i.e., trout and striped bass fisheries, whitewater boating, and wilderness experience in close proximity to an urban area) would not be negatively affected by the proposed greenway.

Environmental Justice

In accordance with Executive Order 12898, disproportionate impacts to low-income or minority communities must be identified and addressed by federally funded projects. EPA's EJSCREEN: Environmental Justice Screening and Online Mapping Tool was utilized to assess potential impacts from the project. Demographic data describing the project vicinity are provided below in **Table A.4-2**. Due to the undeveloped nature of the potential project corridor and the nature of the project

itself, it is not anticipated that there will be significantly disproportionate impacts to low-income or minority communities resulting from the proposed project.

Table A.4-2 | Demographic Data for the Project Corridor (Source EJSCREEN, accessed October 2020)

DEMOGRAPHIC INDICATORS	VALUE	STATE		EPA REGION		USA	
		Avg.	%tile	Avg.	%tile	Avg.	%tile
Demographic Index	30%	37%	43	38%	43	36%	49
Minority Population	35%	36%	57	38%	54	39%	55
Low Income Population	24%	37%	29	37%	30	33%	41
Linguistically Isolated Population	1%	2%	68	3%	55	4%	49
Population with Less Than High School Education	5%	13%	23	13%	23	13%	29
Population under Age 5	5%	6%	51	6%	52	6%	50
Population over Age 64	19%	16%	73	16%	72	15%	75

Water Quality

The 303(d) list is a list of impaired waters that do not meet State water quality standards. Once a water has been added to the 303(d) list, it will remain on the list until the water quality standard has been attained or a total maximum daily load (TMDL) plan has been developed to attain the standard.

The project is within the Lower Saluda River Watershed, Twelvemile Creek - Saluda River Sub-Basin (HUC 03050109-14). The western half of the project is within a Fecal TMDL watershed. Waters are impaired and on the 303(d) list with aquatic life use impairment based on biological diversity data; recreational uses are impaired due to the presence of E. coli bacteria in the water. As well, there is a fish consumption advisory for the Saluda River.

Floodplains

The project starts in Zone X (Other Areas outside of the 0.2% annual chance floodplain) and crosses into Zone A Special Flood Hazard Area (subject to inundation by the 1% annual chance flood, no base flood elevation determined) of the Saluda River. Closer to the Saluda River, the project pathway traverses along the river's Regulatory Floodway (Zone AE).

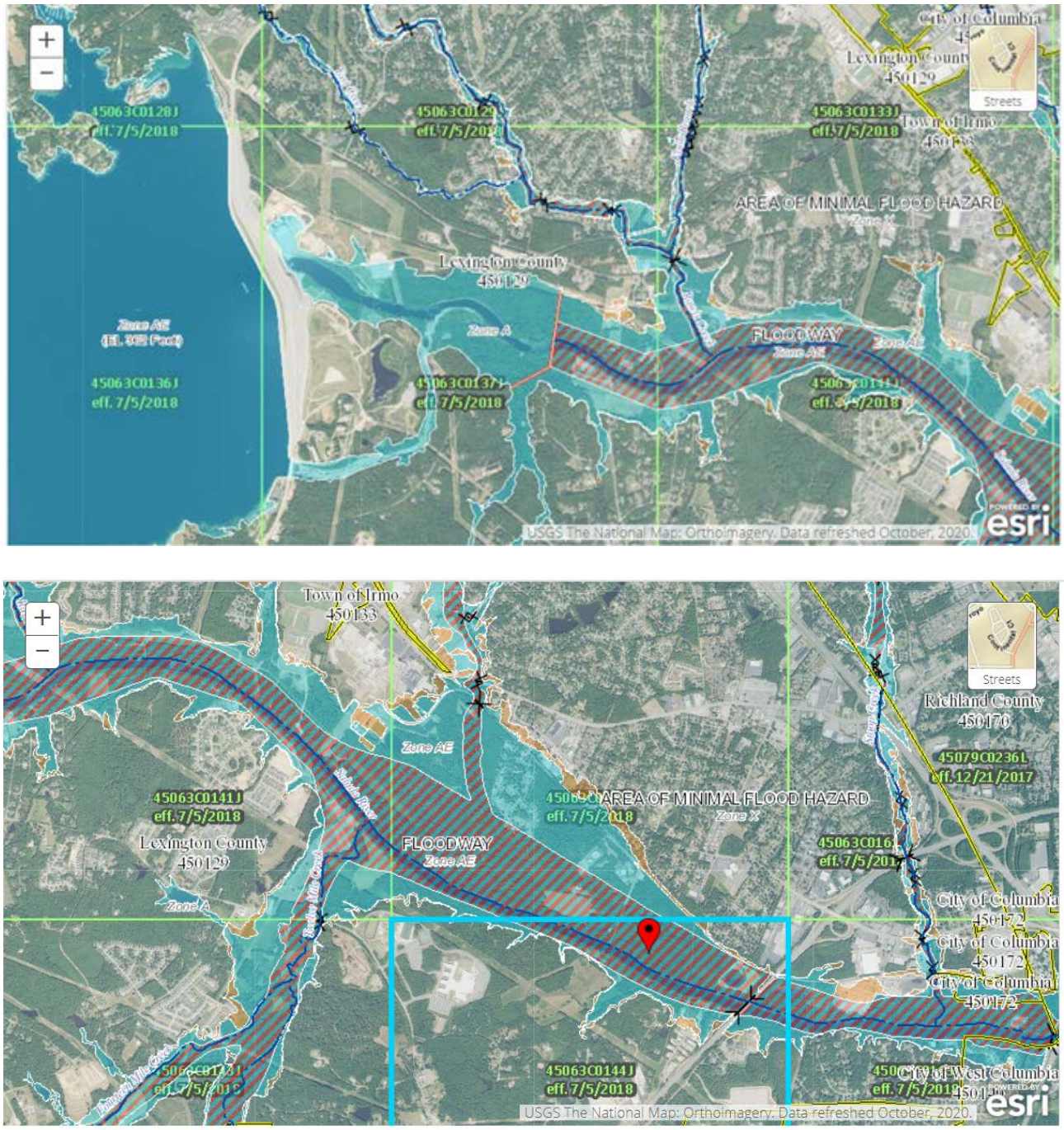


Figure A.4-4 | FEMA Flood Maps

It is anticipated that the pathway and boardwalks will be designed and constructed so as not to cause any impact to the base flood elevation. The project Engineer of Record will send a set of final plans and request for floodplain management compliance to the appropriate Local National Flood Insurance Program Community administrator.

The project is within the tailwaters and project boundary of the upstream Saluda Hydroelectric Project. Normal tailwater elevation is 177 feet. At flood stage, with the spillway fully open, the tailwater could rise to an elevation of 202 feet or higher.[4] This is a similar condition to the existing Saluda Shoals Park path. Coordination with Dominion Energy and the Federal Energy Regulatory Commission will be required.

Hazardous Materials

The EPA's NEPASSIT online mapper was utilized to conduct a screening analysis for hazardous materials sites within the project vicinity. A total of seven facilities were identified within one-half-mile of the proposed project. None of these sites are directly adjacent to the project and do not appear to affect the proposed work.

SCE&G McMeekin Station
2000 North Lake Dr.
Columbia, SC 29212

SEFA Group
6055 Bush River Rd.
Columbia, SC 29212

Cottman Transmission Center
6226 Bush River Rd. Ste A
Columbia, SC 29212

CVS Pharmacy 4156
100 Outlet Point Blvd.
Columbia, SC 29210

Exxon Co. USA #40421
1900 Bush River Rd.
Columbia, SC 29210

Stone Container Corp.
128 Crews Dr.
Columbia, SC 29210

Walmart Supercenter 4379
1326 Bush River Rd.
Columbia, SC 29210

A Phase I Environmental Site Assessment should be conducted of any future easements, right-of-way, or property to be acquired for the proposed work.

[4] Initial Consultation Document, Saluda Hydroelectric Project Relicensing FERC No. 516, 4/05

Farmlands

Areas of the proposed greenway east of Saluda Shoals Park are located within an Urbanized Area as defined by the U.S. Census Bureau, and analysis of farmland impacts is not required.

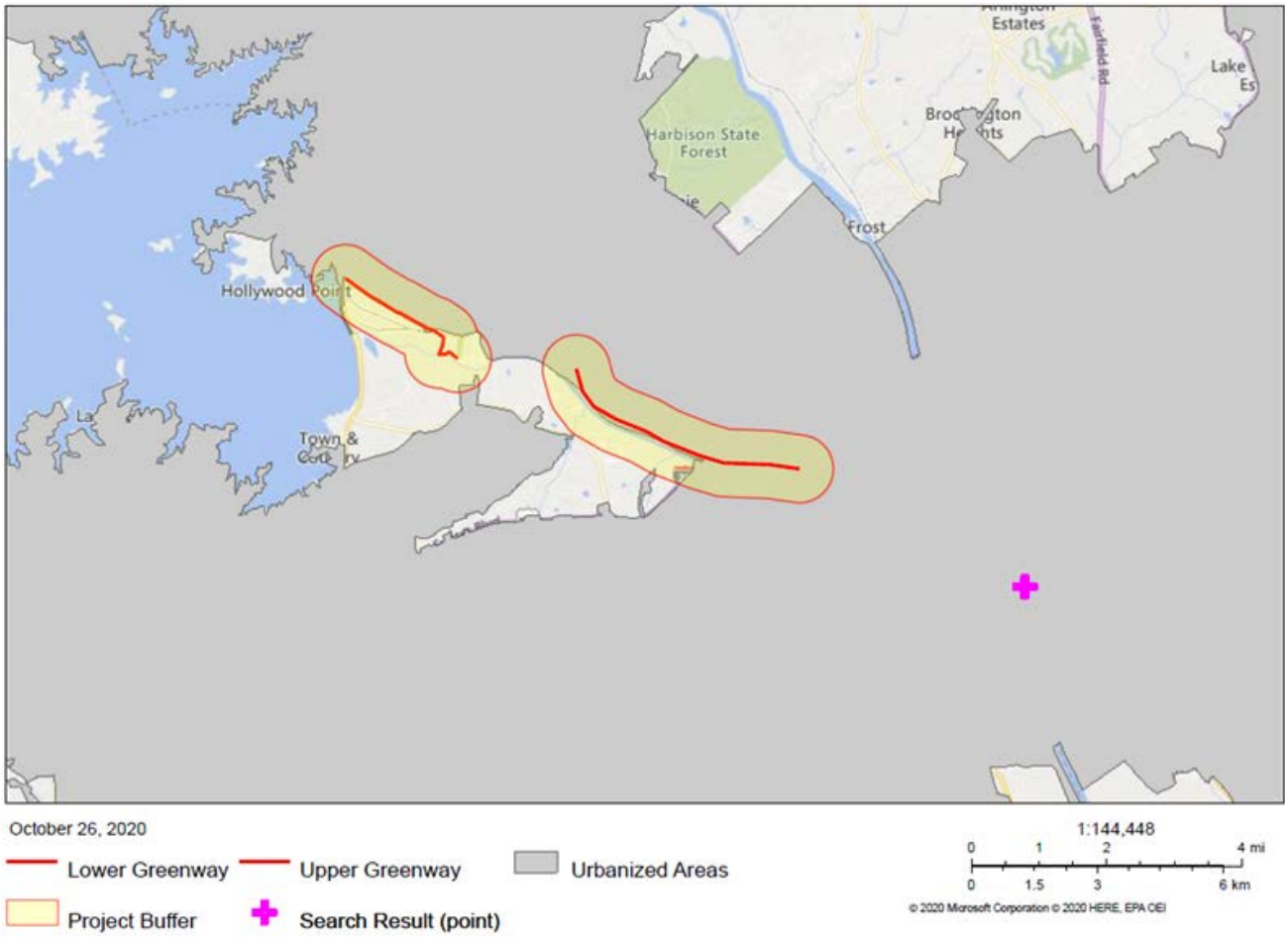
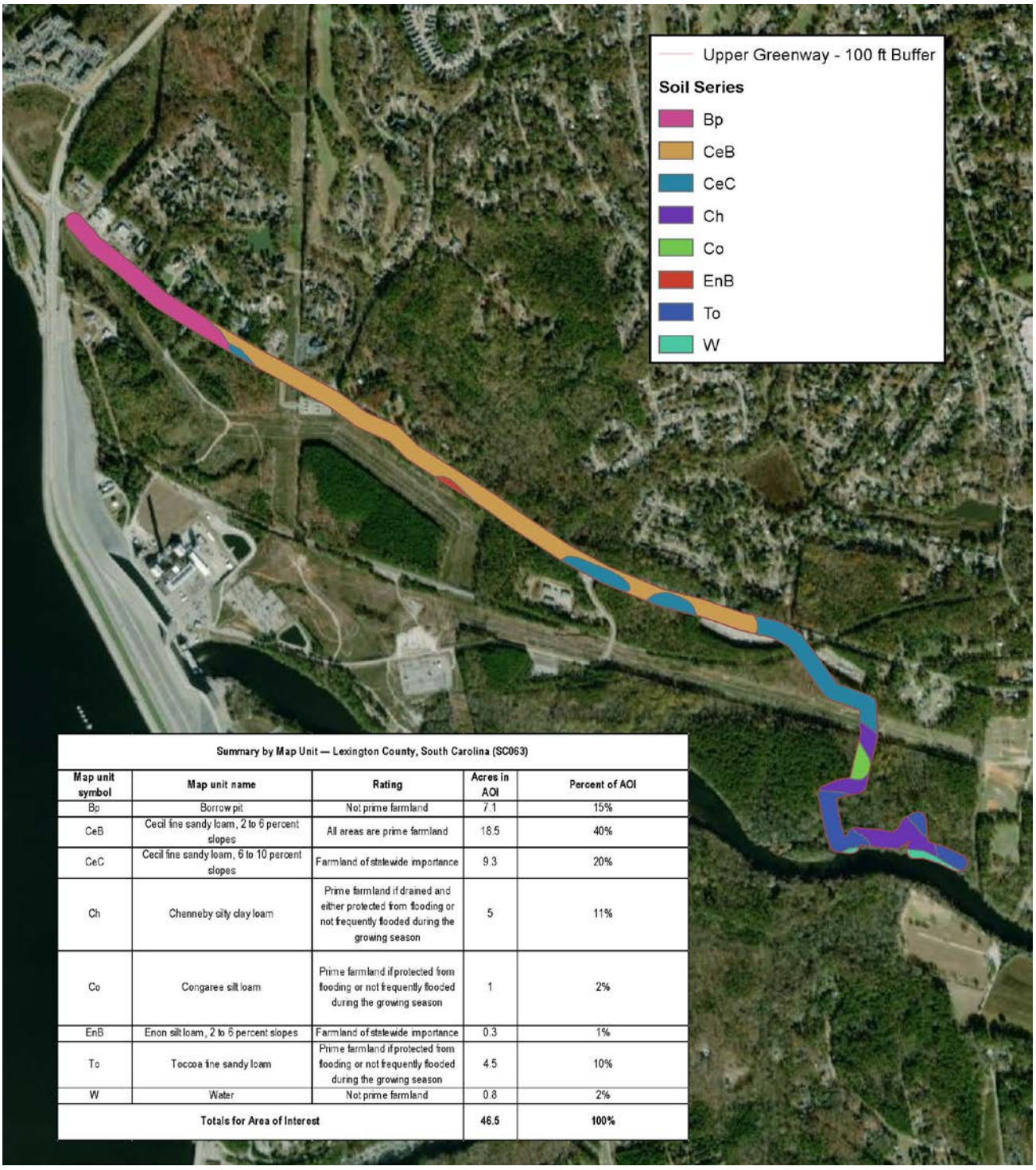


Figure A.4-5 | Urbanized Areas in Greenway Vicinity

West of Saluda Shoals Park, the greenway corridor crosses several areas that are considered Prime Farmland or Farmland of Statewide Importance (see **Figure A.4-6**). Projects with a federal permit license or funding, must consider impacts to these farmland types and consult with the Natural Resource Conservation Service (NRCS) for completion of a Farmland Conversion Impact Rating analysis using Form NRCS-CPA-106 for corridors. If the Farmland Conversion Impact Rating analysis scores less than 160, potential effects to important farmland will not require further consideration (7 CFR § 685.4[c][2])); however, if the site receives a score of 160 or

greater, analysis will have to be completed to determine the availability of alternatives for reducing potential adverse effects to important farmland.



Summary by Map Unit — Lexington County, South Carolina (SC063)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bp	Borrow pit	Not prime farmland	7.1	15%
CeB	Cecil fine sandy loam, 2 to 6 percent slopes	All areas are prime farmland	18.5	40%
CeC	Cecil fine sandy loam, 6 to 10 percent slopes	Farmland of statewide importance	9.3	20%
Ch	Chenneby silty clay loam	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	5	11%
Co	Congaree silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season	1	2%
EnB	Enon silt loam, 2 to 6 percent slopes	Farmland of statewide importance	0.3	1%
To	Toccoa fine sandy loam	Prime farmland if protected from flooding or not frequently flooded during the growing season	4.5	10%
W	Water	Not prime farmland	0.8	2%
Totals for Area of Interest			46.5	100%

Figure A.4-6 | NRCS Soils Map

Air Quality

Lexington County is in an attainment area for National Ambient Air Quality Standards (NAAQS). As a result, Lexington County meets or exceeds the standards established by the Environmental Protection Agency (EPA) for criteria pollutants and air quality. Although the project is not expected to substitute transportation via motorized vehicles on highways, the anticipated recreational and non-motorized transportation uses of the project are not of an air-quality pollutant generating nature. No qualitative or quantitative analyses are anticipated to be required as part of the NEPA phase.

Noise

The SCDOT Traffic Noise Abatement Policy[5] describes the policies and procedures that the Department follows to be consistent with 23 CFR Part 772 as well as supporting FHWA noise guidance and policy documents.

A noise analysis is required for all Type I projects, including:

1. The construction of a highway on new location; or
2. The physical alteration of an existing highway where there is either:
    a. Substantial Horizontal Alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or
    b. Substantial Vertical Alteration. A project that removes shielding therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor; or
3. The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a HOV lane, High-Occupancy Toll (HOT) lane, bus lane, or truck climbing lane; or

[5] South Carolina Department of Transportation Traffic Noise Abatement Policy (10/10/19)

4. The addition of an auxiliary lane of at least 2,500 feet, except for when the auxiliary lane is a turn lane; or
5. The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or
6. Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane of at least 2,500 feet; or
7. The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza.

This project is not a Type I project nor expected to be of a noise generating nature. No noise analyses are anticipated to be required during NEPA.

NEPA Documentation

Funding for this project will be provided through Federal, State, and local transportation/transit funding sources with the required match provided by Central Midlands Council of Government or other local or State sources. Therefore, the National Environmental Policy Act applies and a NEPA document will be prepared assessing the human and environmental impacts of the project. It is anticipated that a Programmatic Categorical Exclusion (PCE) level of NEPA will be sufficient for project documentation. PCE's cover actions that FHWA has determined do not individually or cumulatively have a significant effect on the environment. The action qualifies for CE listed in 23 CFR 771.117 (c) (3) *Construction of bicycle and pedestrian lanes, paths, and facilities*.

Environmental Permitting

Impacts to jurisdictional wetlands should be minimized by the use of boardwalks in areas of wetland crossing. Likewise, bridges will be utilized to avoid impacts to streams. A Clean Water Act (CWA) Section 404 permit is required for alteration to jurisdictional waters of the U.S., including wetlands. USACE Nationwide Permit 42 exists for Recreational Facilities for minimal impact projects with no more than 1/2 acre of wetlands and 300 linear feet of streambed. In addition to the Section 404 permit, the South Carolina Department of Health and Environmental Control must grant, deny, or waive a Water Quality Certification, in accordance with Section 401 of the CWA.

Limited stream credits are available from three existing mitigation banks and no wetlands credits are available. It will be important during project design to re-evaluate the mitigation bank status or plan for further avoidance of streams and wetlands.

The CWA requires the reduction of water pollution and gave the United States Environmental Protection Agency (EPA) the congressional authority to develop programs to improve the health of navigable waters. EPA in response developed regulations that created a program of discharge permits as part of the National Pollutant Discharge Elimination System (NPDES) to regulate point source discharges. The 1987 amendments to the CWA extended NPDES permits to industrial discharges, including stormwater runoff associated with land disturbing activity. The 1987 CWA Amendments also require NPDES permitting for stormwater runoff from urbanized areas. A municipal separate storm sewer system (MS4) NPDES permit is required based on population. Authority to administer the NPDES permit program was delegated to state agencies, such as SCDHEC, by the EPA.

This project crosses regulatory boundaries for different agencies with MS4 programs. Entities who implement the stormwater programs include Lexington County and the City of Columbia. Since the majority of the project is in Lexington County's MS4 area, it is possible that the county may take the lead on all of the stormwater permitting. However, both the City and the County should be engaged during design phases to finalize their preferred permitting method.

TRANSPORTATION ANALYSIS

Trip Potential Analysis

The trip potential analysis highlights: 1) places where people are likely to bike and walk; and 2) where people are already walking and biking (i.e., areas with high demand). Places with high levels of existing/potential demand are also places where bicycle and pedestrian infrastructure can be the most impactful. High demand areas will be one data point that is used to shape proposed connectivity to the Lower Saluda Greenway.

The factors shown in **Table A.5-1** were used to identify demand. Data was aggregated from a variety of sources, including CMCOG, Lexington County, Census, SCDOT, and field reconnaissance. To normalize the different units of measure of the factors below, a grid of half-mile wide hexagons was overlaid across the project area and each hexagon was assigned its own score.

The results of the trip potential analysis, shown in **Figure A.5-1**, indicate that the trip drivers are mostly present north of the project area where there is more population density and an existing park and greenway. The area near where I-26 passes over the Lower Saluda River is also a hot spot of demand. This information will be used to direct where the optimal locations for greenway access points and connectors should be located.

Table A.5-1 | Demand Factors

FACTOR	RATIONALE	POINTS
Population Density *population per census block group (scored based on highest density in unit of analysis area)*	Enhancing infrastructure in densely populated areas impacts the most users per given area	• High: 20 points • Mid: 10 points • Low: 5 points
Attractors *includes parks, schools, client suggested locations, and universities*	These common attractors are often destinations for people walking and people on bicycles	• Each attractor: 10 points
Concentrations of residential uses *scored based on presence of land use in unit of analysis*	Higher density residential land use means more users per a given area.	• Multifamily and Multifamily/Single Family housing: 20 points • Single Family housing: 10 points
Intersection Density *number of intersections in an area.*	The connectivity of an area's street network has a major impact on the ability of pedestrians and cyclists to travel efficiently to nearby destinations. More intersections can lead to safer travel conditions for pedestrians and cyclists.	• High: 20 points • Mid: 10 points • Low: 5 points
Transit *includes bus routes and bus stops*	Active transportation and transit functionality go hand-in-hand; it is important that active transportation around transit stops and routes is safe and connected for users	• More than one stop: 10 points • One stop: 5 points
Existing Greenways and Trails *includes all existing greenways and trails within the study area*	Existing bicycle and pedestrian facilities attract users.	• Trail through an area: 10 points

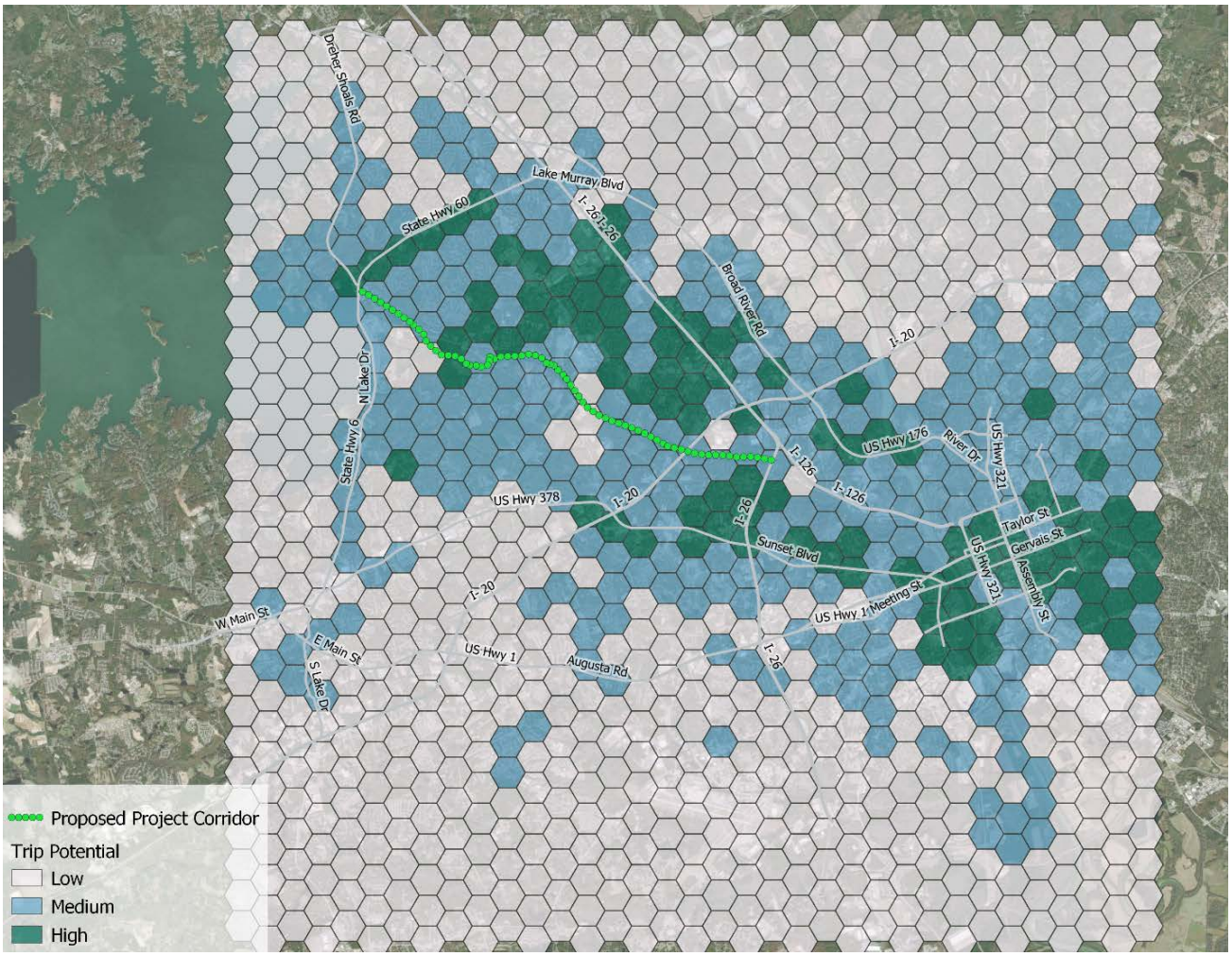


Figure A.5-1 | Trip Potential

Crash Analysis

While the ease of travel in terms of distance from a potential users' house to a proposed access point is vital, the perceived safety of that route is of equal if not greater importance. One measure of how safe a route may be is to look at crash history along those corridors. All data was provided by SCDOT.

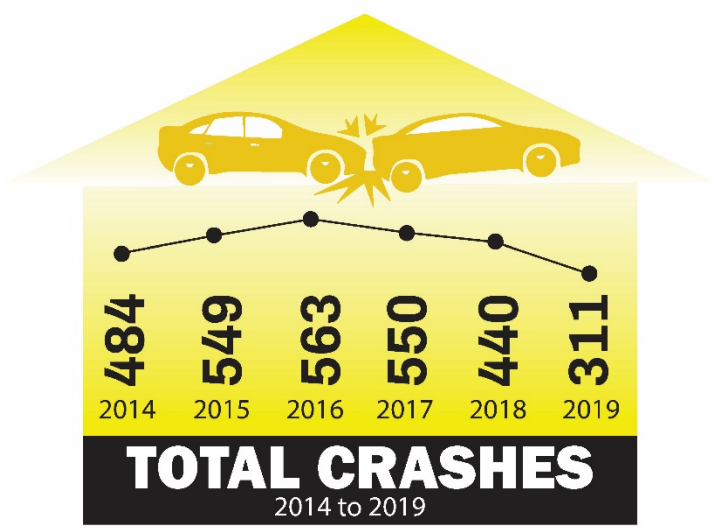


Figure A.5-2 | Crashes by Year 2014-2019

Along the roads and at intersections in the project area, there were 2,897 crashes between January 2014 and September 2019. **Figure A.5-2** shows the breakdown by year. The most common crash type was rear-end crashes, with those making up 55% of all crashes.

The locations and number of those crashes are shown in **Figure A.5-4**. To create the groupings shown, the reported roads were split into quarter-mile segments with particular care taken to make sure that major intersections or interchanges were counted as catchment points.

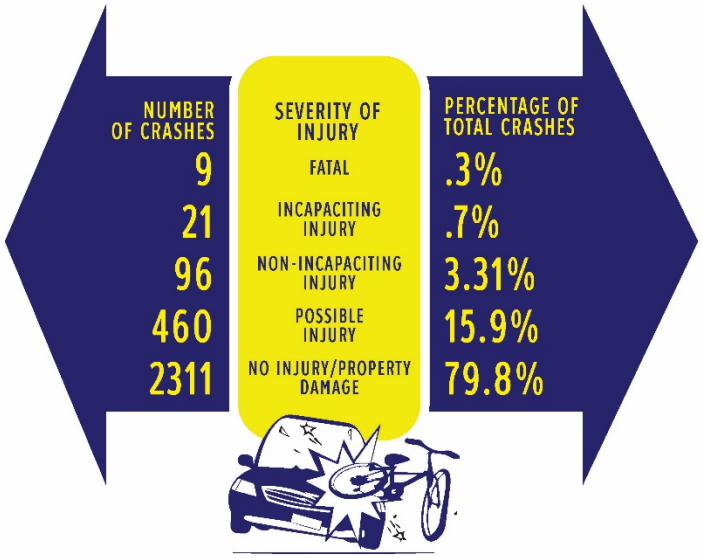


Figure A.5-3 | Crash Severity 2014-2019

While the total number of crashes is very large (2,897), the amount of crashes that resulted in injuries makes up approximately 20% of the total; however, even property damage (without injury) contributes to the perceived safety of a street and its surrounding environment. For instance, if someone travels a road often and frequently sees crashes, they will deem the road unsafe regardless of whether injuries occurred. **Figure A.5-3** shows the breakdown of crashes by severity of injury.

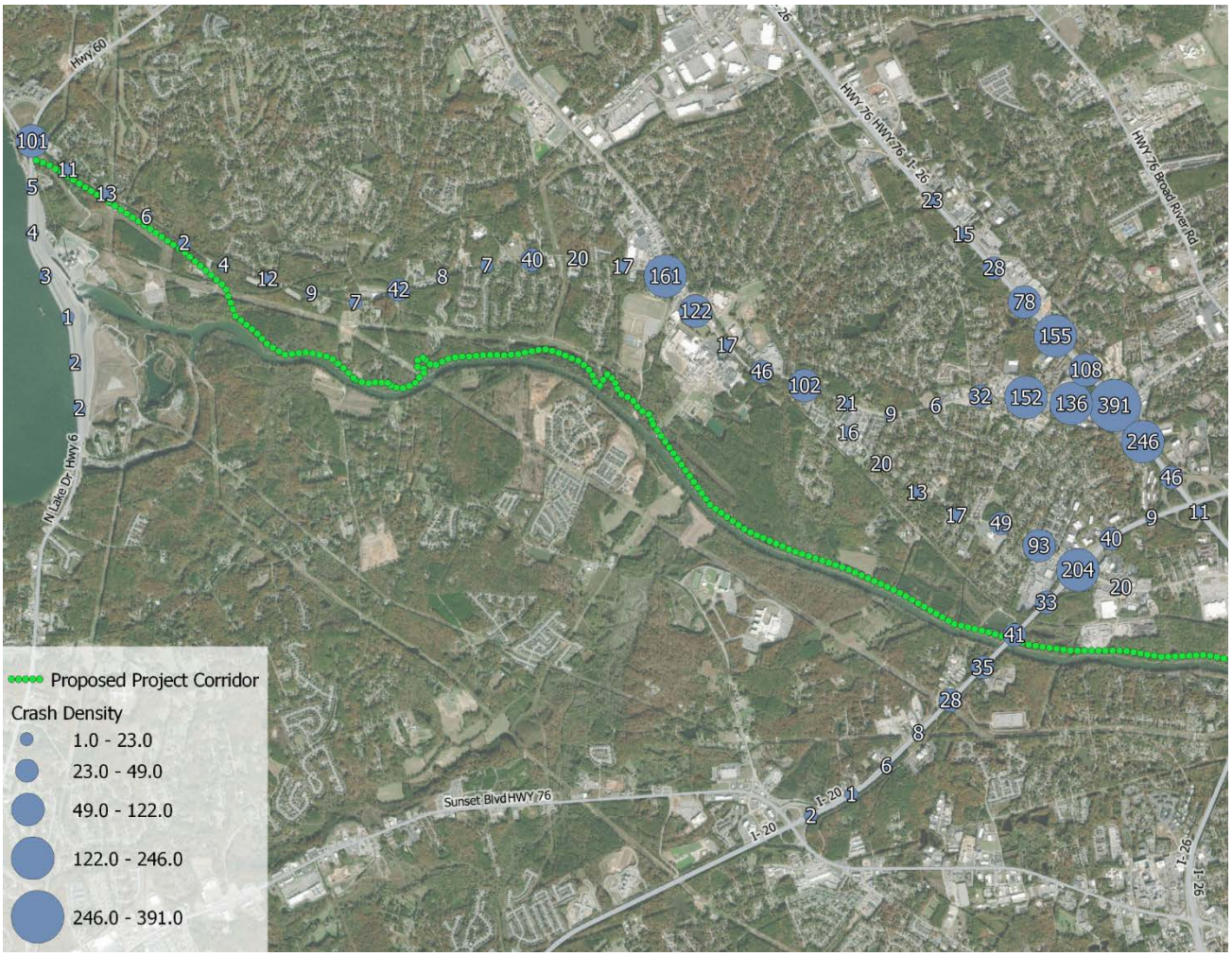


Figure A.5-4 | Historical Crashes 2014-2019

The data included in Figure A.5-3 shows how many injuries or fatalities were cause by each crash type. These values were added together for each crash, then again for each of the quarter-mile intervals. The results are shown in **Figure A.5-5**.

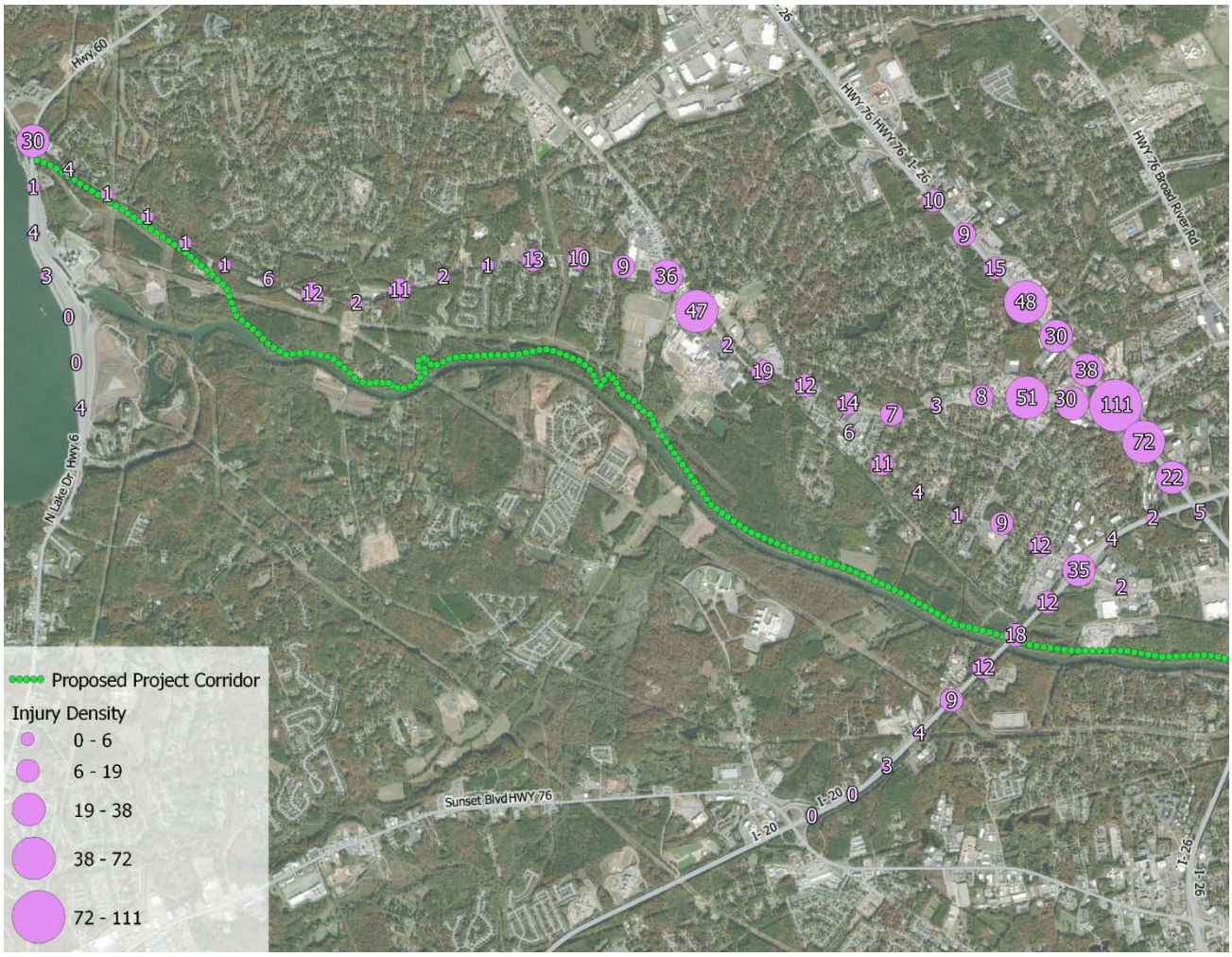


Figure A.5-5 | Injury Density 2014-2019

Figure A.5-6 depicts the locations of pedestrian and bicycle crashes, which totaled 11 out of the 2,897 crashes. The 11 crashes included 3 bicycle crashes and 8 pedestrian crashes.

While that is not many crashes, all of them resulted in injuries or death. There was one fatality and two incapacitating injuries in the group, both from crashes between motor vehicles and pedestrians.

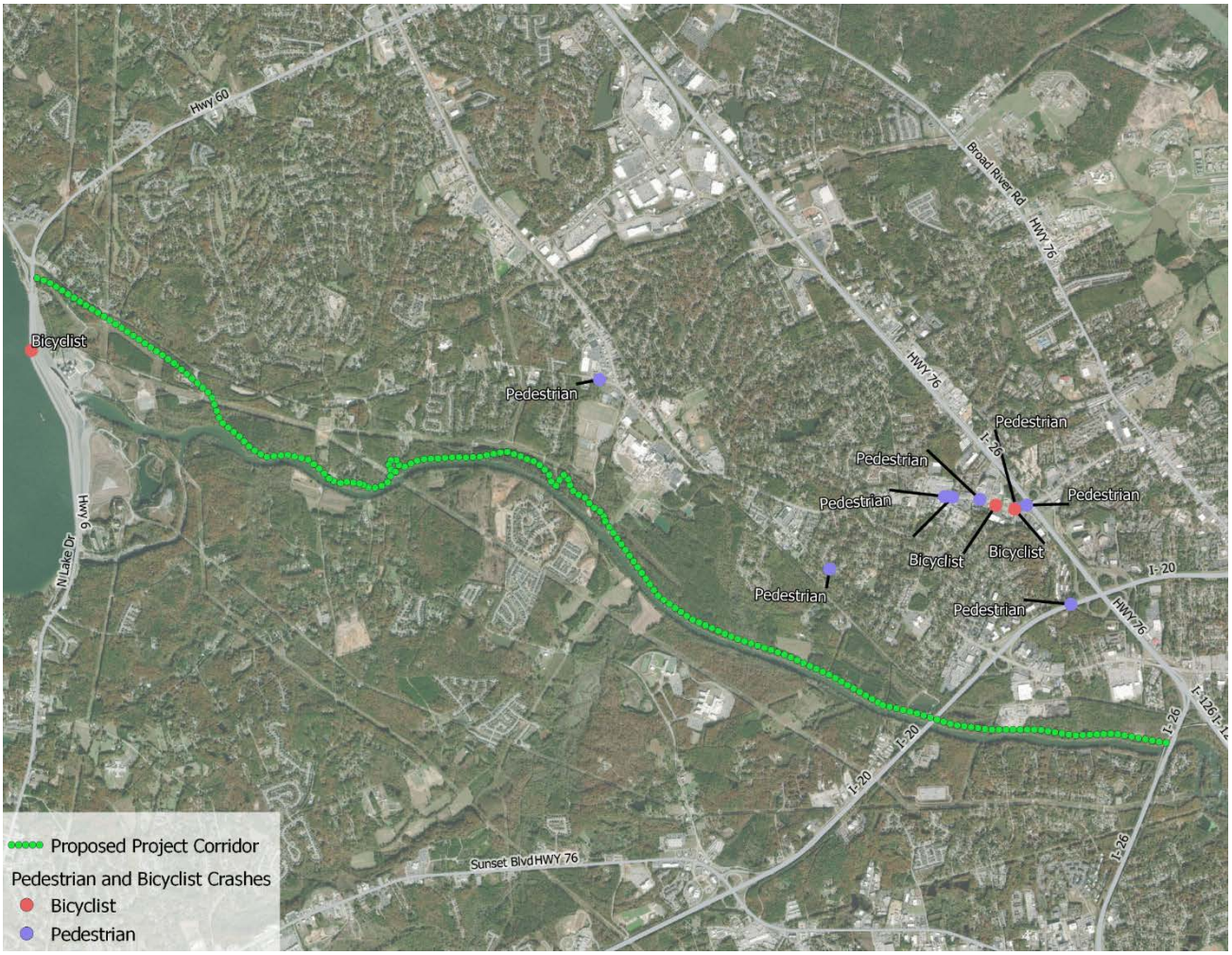


Figure A.5-6 | Bicycle and Pedestrian Crashes 2014-2019

Connectivity Analysis

Understanding how people from surrounding neighborhoods, corridors, businesses, and major destinations will access the proposed greenway is important to the ultimate success of the greenway. Existing infrastructure will play a critical role in achieving connectivity. The connectivity analysis considers the connectedness of the existing transportation network and its ability to facilitate connectivity to the greenway. Data was aggregated from a variety of sources, including CMCOG, Lexington County, Census, SCDOT, and field reconnaissance.

Measure of Connectivity

The connectivity analysis builds upon the trip potential analysis. The trip potential analysis evaluated a grid of half-mile wide hexagons overlaid across the project area, encompassed every census block within a 2-mile radius, and assigned each hexagon its own score. Somewhat similar, potential connectivity is measured by using two of the factors from the trip potential analysis: 1) population density; and 2) concentrations of residential uses (see **Table A.5-2**). Only hexagons that received a score of 10 or greater or a "yes" for the presence of high-density residential areas will be used. The connectivity analysis demonstrates how well the transportation network connects important destinations to residents and visitors. **Table A.5-3** lists the three levels of connectivity that were identified to better normalize the results of the analysis.

Table A.5-2 | Connectivity Analysis Variables

CATEGORIES	RATIONALE
Population Density	Densely populated areas that impact the most users per given area.
High Concentration of Residential Land Use	Higher density residential land use means more users per a given area.

Table A.5-3 | Measures of Connectivity

CATEGORY	LEVEL OF CONNECTIVITY
High-Connectivity	Must be within BOTH categories.
Medium-Connectivity	Must be within ONE category.
Low-Connectivity	Must be within NO categories

Figure A.5-7 illustrates levels of connectivity, with the high connectivity (i.e., light areas) on the map indicating areas that have a high-density population and high concentrations of residential uses. Whereas, medium connectivity (i.e., gray/darker blue areas) indicates areas that have either a high-density population or a high concentration of residential uses. While areas not represented by a hexagon have low connectivity.

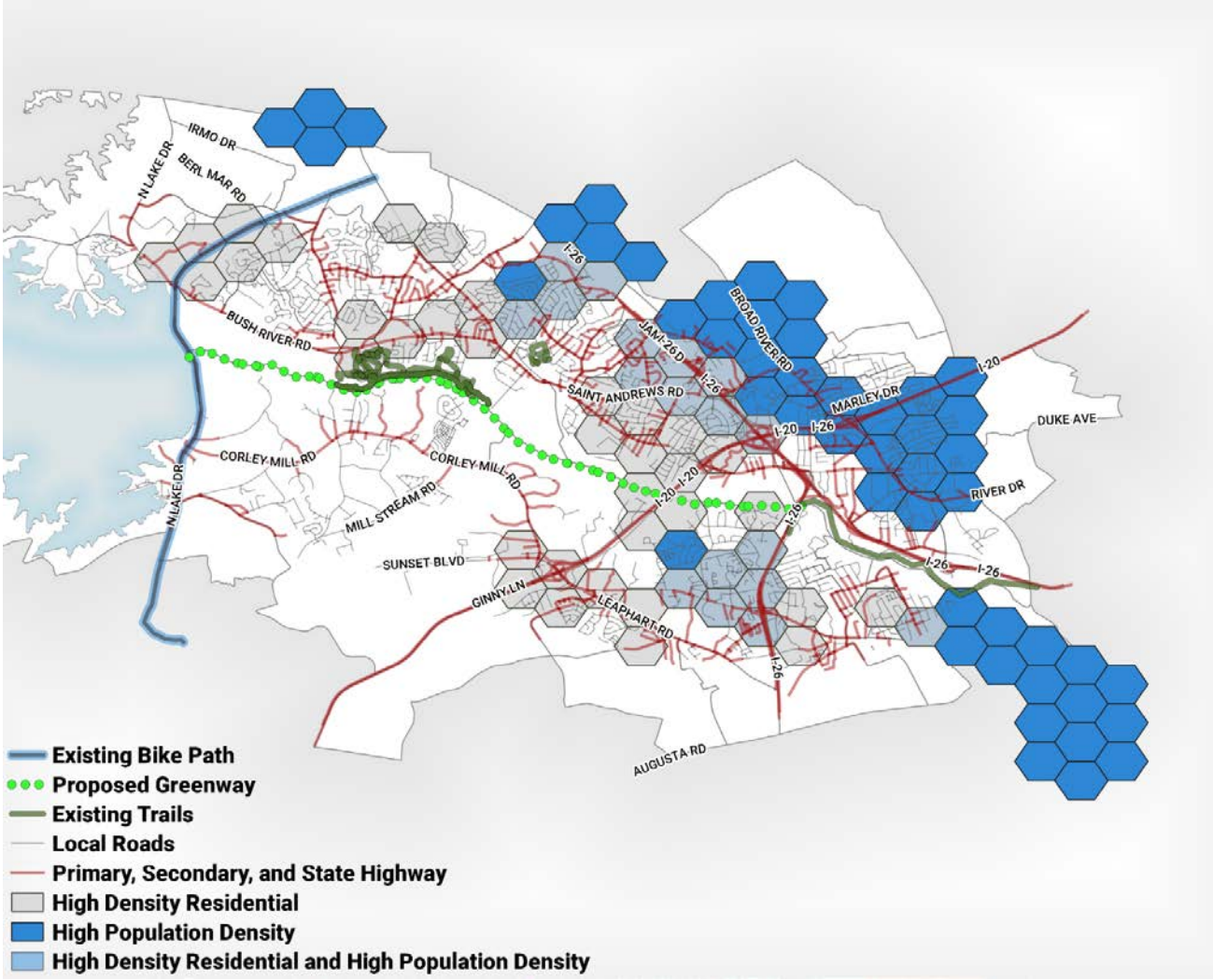


Figure A.5-7 | Connectivity Analysis

Street Network

This section focuses on how the street network will connect surrounding neighborhoods, corridors, businesses, and major destinations to the proposed greenway. Within a two-mile radius of the proposed Lower Saluda Greenway there is a connected and continuous street network stretching approximately 412 miles in length, that increases mobility and accessibility for residents and visitors.

The existing street network was analyzed and divided into two categories based on overall connectivity: 1) state highways along with primary or secondary roads (161 miles in length); and 2) local roads (251 miles in length). Local streets may serve nearby neighborhoods in terms of overall connectivity within the target area; however, due to the absence of sidewalk data, it could not be determined if local streets would be adequate for nearby residents to bicycle or walk to the proposed greenway. Additionally, individuals not living/working within a direct connection to the proposed greenway via a local street would ultimately resort to the use of primary and secondary streets or state highways, due to their ability to carry larger traffic volumes for longer distances.

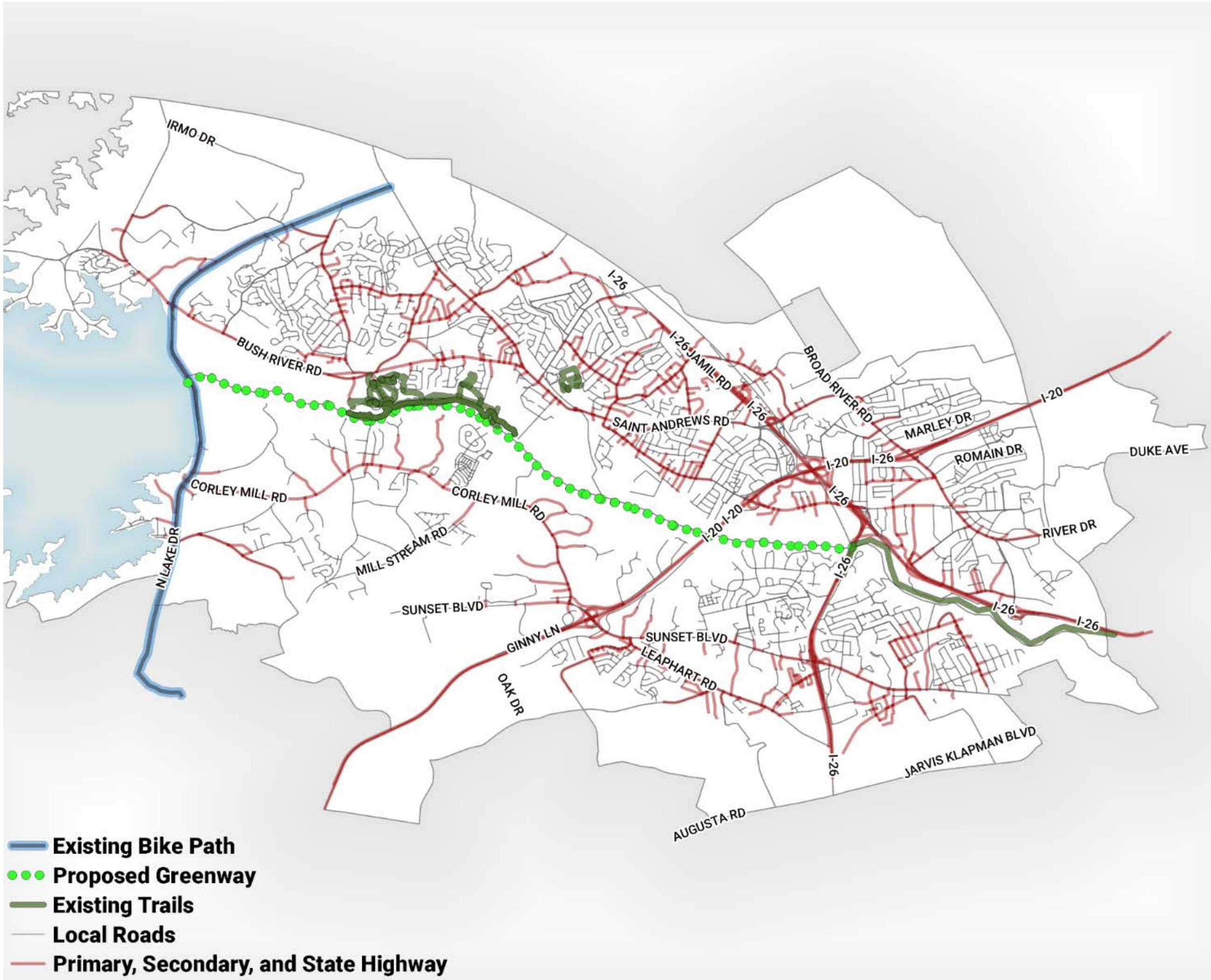


Figure A.5-8 | Transportation Network

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Bicycle Network

Connected bicycle networks have emerged as one of the most important ways to encourage, support, and expand bicycling for people of all ages and abilities. For people to choose to ride a bicycle, they must feel comfortable at each step of their trip.

One dedicated bicycle facility exists within two miles of the greenway corridor; it consists of painted bike lanes along SC 6/SC 60 from the Town of Lexington to the Town of Irmo. The greenway corridor's western end intersects with this bike facility near the Lake Murray Dam. Of its approximate 8 miles in length, the bike lane runs through 1.3 miles of areas identified as having medium connectivity.

Pedestrian Network

Short block lengths (i.e., generally less than 200 feet), buffered, wide sidewalks, and other dedicated areas for pedestrians to travel help users feel safe and comfortable. Greenways support those who are already walking and encourage others to walk for trips, exercise, and recreation. Currently, in proximity to the Lower Saluda Greenway corridor, there are several greenways stretching over 15 miles in length. Approximately 12 miles of existing greenway are in medium connectivity areas.

Additional observations include:

- All existing greenways, except for the Seven Oaks Greenway, intersect with the Lower Saluda Greenway corridor;
- Three parks are in proximity to existing greenways;
- Saluda Shoals Boat Launch is located along the greenway corridor; and
- Only the Seven Oaks Greenway has a transit stop within 0.5 mile of an existing or proposed greenway.

Key Intersections

The connectivity of an area's street network has a major impact on the ability of pedestrians and bicyclists to travel efficiently to nearby destinations. Intersections provide critical crossing locations. Fifteen key intersections were identified in this analysis; **Table A.5-4** and **Figure A.5-9** respectively list and show these intersections and their relationship to existing connectivity.

Table A.5-4 | Key Intersection Connectivity

INTERSECTION	EXISTING CONNECTIVITY LEVEL
Bush River Rd @ Ashland Rd	Medium
Bush River Rd @ Bilton Rd	Low
Bush River Rd @ Coldstream Dr	Low
Bush River Rd @ Greendale Dr	Medium
Bush River Rd @ Greenpines Rd	Medium
Bush River Rd @ I-20	Medium
Bush River Rd @ Lake Murray Blvd	Medium
Bush River Rd @ Wescott Rd	Medium
I-26 @ I-20	High
Piney Grove Rd @ I-26	High
St Andrew Rd @ Ashland Rd	High
St Andrew Rd @ Bush River Rd	Medium
St Andrew Rd @ I-26	High
St Andrew Rd @ Tram Rd	Low
Sunset Blvd (US 378) @ I-20	Medium

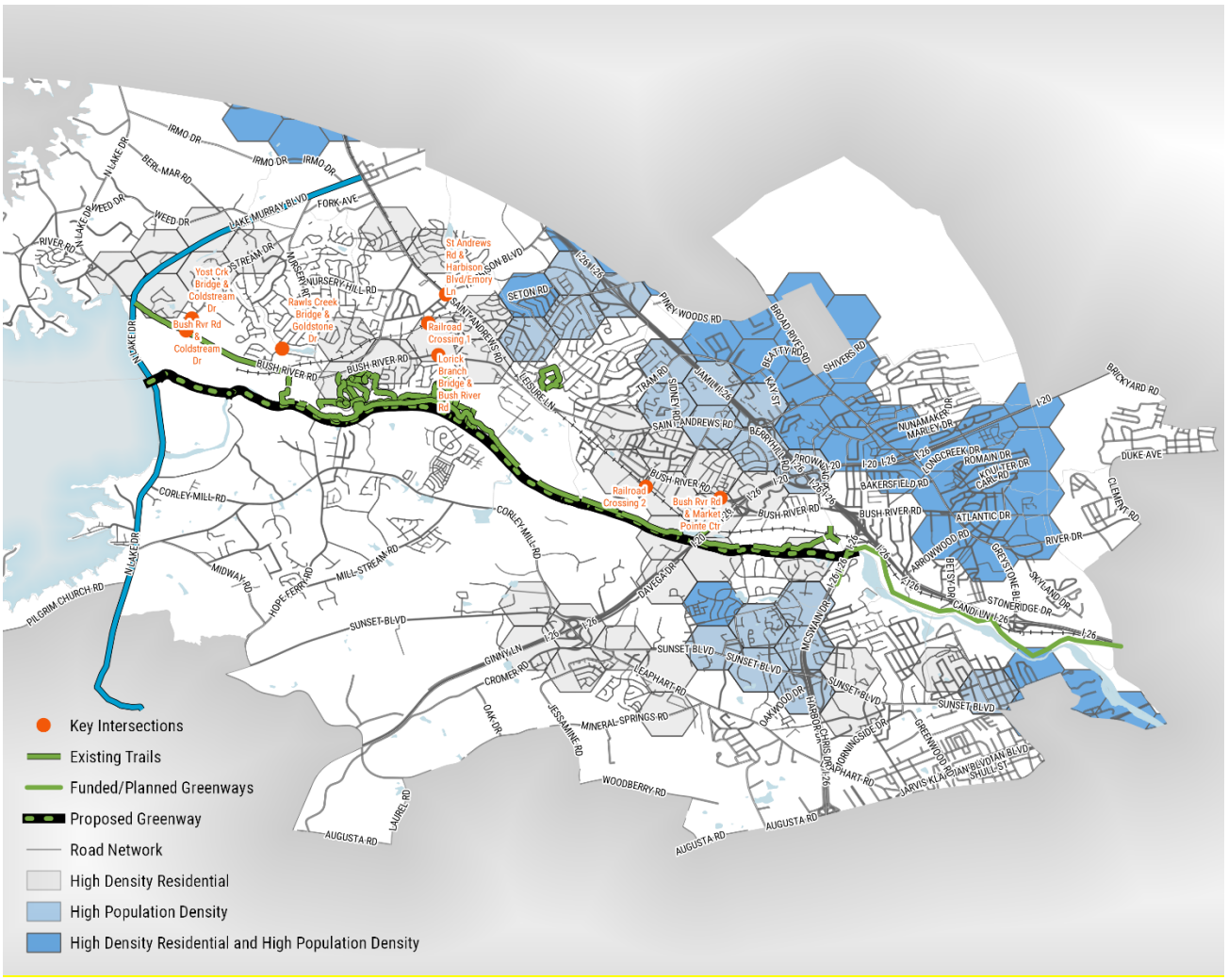

Figure A.5-9 | Key Intersections' Relationship to Existing Connectivity

Transit

The COMET transit system provides public bus service throughout the Midlands. While service is predominately in Richland County, the St. Andrews Local (Route 83L), runs parallel to the proposed greenway corridor on Bush River Road and St. Andrews Road. The St. Andrews Local connects to Harbison, Dutch Square, and Downtown Columbia. Active transportation and transit go hand-in-hand; it is important that active transportation around transit stops and routes are safe and connected for users. **Table A.5-5** lists bus stops in proximity to the proposed greenway corridor and their level of connectivity; bus stops are represented geographically in **Figure A.5-10**.

Table A.5-5 | Bus Stop Connectivity

BUS STOP	EXISTING CONNECTIVITY LEVEL
Bush River & Ashland WB	High
St Andrews & Tram WB	Low
St Andrews & Leisure WB	Low
St Andrews & Piney Grove WB	Low
St Andrews & Harbison WB	Low
St Andrews & Avery EB	Low
St Andrews & Ashland EB	High

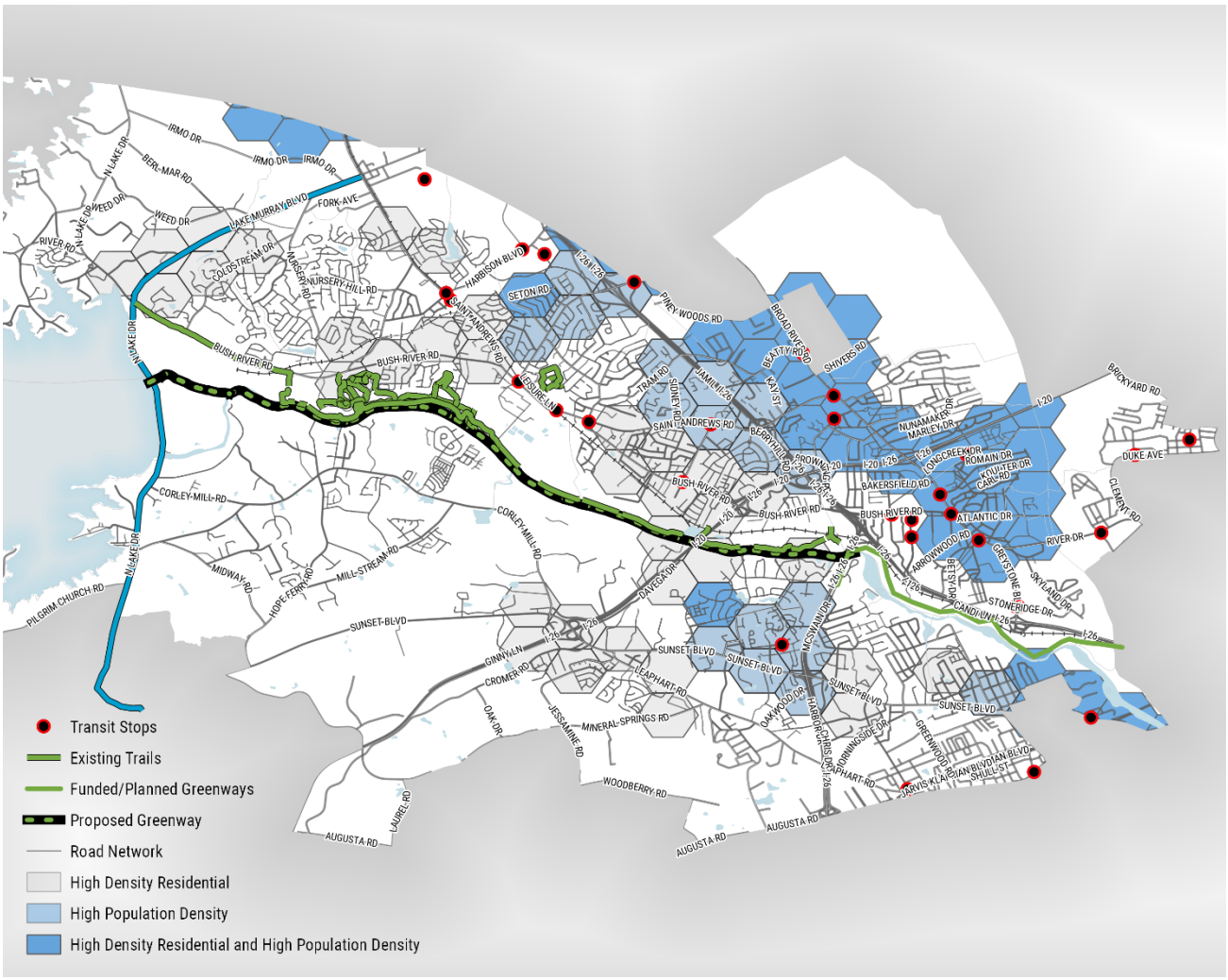

Figure A.5-10 | Transit Stops' Relationship to Existing Connectivity

Major Attractors

Parks, public access points, and schools serve as major attractors for people who either walk or bike. It is important to understand how well these attractors will connect to the proposed greenway. **Figure A.5-11** shows major attractors and their relationship to existing connectivity.

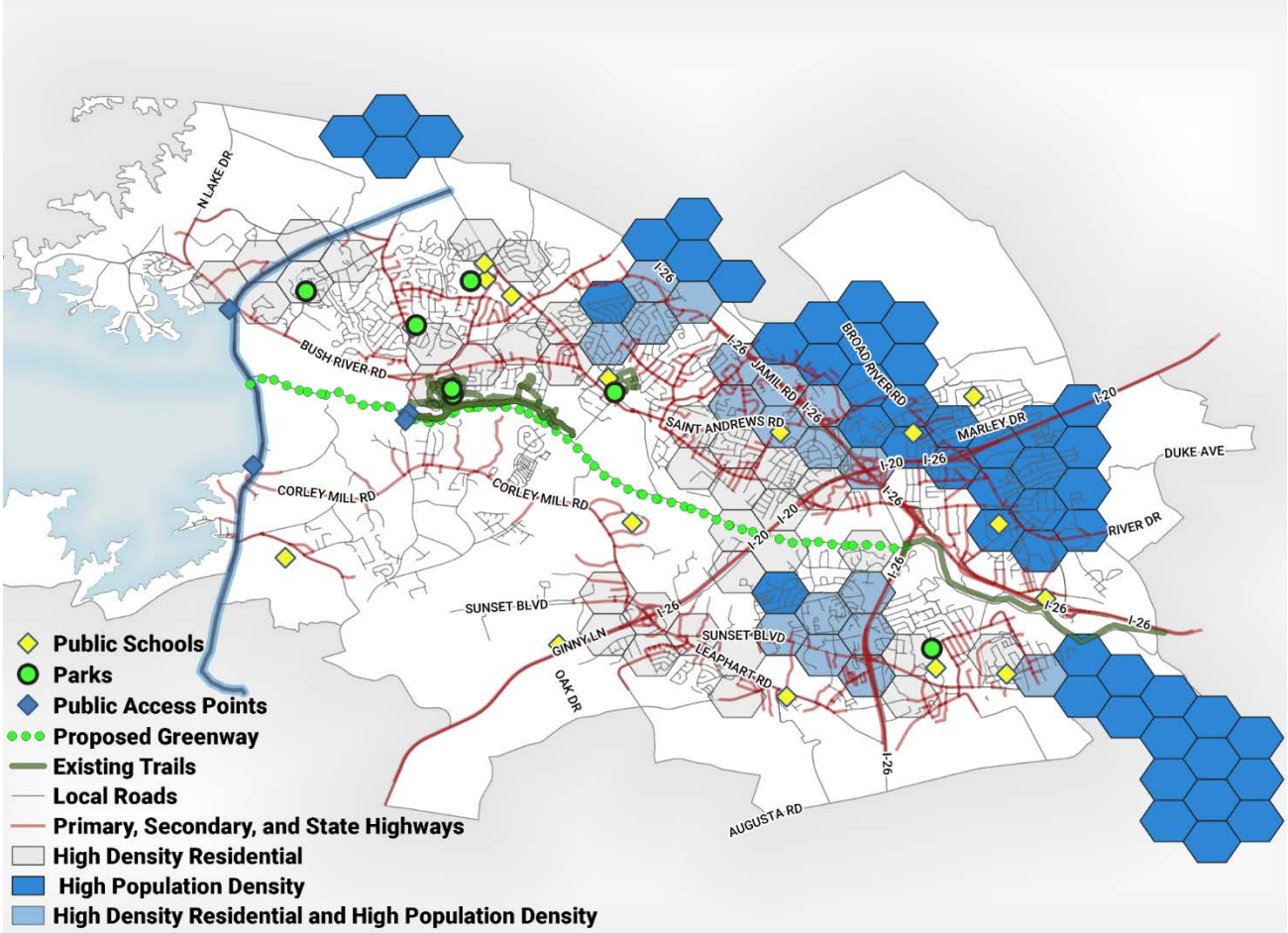

Figure A.5-11 | Major Attractors' Relationship to Existing Connectivity

Parks

As shown in **Table A.5-6**, there are seven parks within a two-mile radius of the proposed greenway. Five of those parks are in high density residential neighborhoods, offering increased connectivity, while two parks are in low-density residential neighborhoods with less connectivity. No parks are in high-density populated areas.

Table A.5-6 | Park Connectivity

PARK	EXISTING CONNECTIVITY LEVEL
Beverly Brandes Park	Medium
Howard Sports Complex	Medium
ICRC Administration Center	Medium
Irmo Middle Complex	Low
Nursery Road Complex	Low
Saluda Shoals Park	Medium
Seven Oaks Park	Low

Public Access Points

Table A.5-7 lists the four waterway public access points in proximity to the greenway corridor. While the Saluda Shoals Boat Launch currently has a low level of connectivity, it is on the proposed greenway corridor and should have a higher level of connectivity once the Lower Saluda Greenway is constructed. The two Lake Murray Access Points are located on the SC 6 bike path, with the Lake Murray Dam North Recreational Area/Boat Ramp having a medium existing level of connectivity.

Table A.5-7 | Public Access Point Connectivity

PUBLIC ACCESS POINT	PROVIDES ACCESS TO	EXISTING CONNECTIVITY LEVEL
Hope Ferry Landing	Saluda River	Low
Lake Murray Dam North Recreational Area/Boat Ramp	Lake Murray	Medium
Lake Murray Public Park/ Dreher Shoals Dam Parking Lot	Lake Murray	Low
Saluda Shoals Boat Launch	Saluda River	Low

Public Schools

There are 16 public schools located within 2 miles of the proposed greenway corridor. Only one school, Seven Oaks Elementary, is in both a high-density populated area and within a high-density residential land use area. A vast majority of schools have a low level of existing connectivity, as shown in **Table A.5-8**.

Table A.5-8 | Public School Connectivity

PUBLIC SCHOOL	EXISTING CONNECTIVITY LEVEL
Columbia High	Low
CrossRoads Intermediate	Low
HB Rhame Elementary	Medium
Irmo High	Low
Irmo Middle	Low
Leaphart Elementary	Low
Meadow Glen Middle	Low
Midway Elementary	Low
Northside Middle	Low
Nursery Road Elementary	Low
Pineview Elementary	Low
River Bluff High	Low
Saluda River Academy for the Arts	Medium
SC Connections Academy	Low
Seven Oaks Elementary	High
St Andrews Middle	Medium
William S. Sandel Elementary	Medium