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Appendix E

Community Characterization Report



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Community Characterization Report

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1 Introduction

HDR, in cooperation with a team of consultants, has been contracted by Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) to assist in advancing a bus rapid transit (BRT) called the Lowcountry Rapid Transit (LCRT) project into the Federal Transit Administration (FTA) Project Development Phase of the FTA Capital Investment Grant Program, completing National Environmental Policy Act (NEPA) review, and gaining FTA approval to enter Engineering. The objective of the current phase of the LCRT is to support BCDCOG in defining the project and developing a Locally Preferred Alternative that is in compliance with the requirements of NEPA and can be advanced into FTA Project Development.

In accordance with NEPA, natural and human environmental effects from the LCRT are being considered. This report, the community characterization report (CCR), presents historical, social, cultural, economic, and environmental justice (EJ) conditions near the LCRT. Information summarized in this report will help inform the community impact assessment (CIA), an evaluation of effects of the project on communities and their qualities of life.

1.1 Project Description

The LCRT would traverse dedicated guideways or operate within mixed traffic on existing roadways along the 23-mile-long Interstate (I-) 26 corridor between Summerville and downtown Charleston in Berkeley, Charleston, and Dorchester counties, South Carolina (Figure 1). As conceived in the 15-month *i-26ALT* study initiated by the Charleston Area Transportation Study (CHATS), the LCRT would extend between Main Street in Summerville and Line Street in downtown Charleston, generally following US Highway (US) 78/Rivers Avenue and Meeting Street for approximately 23 miles.

The LCRT NEPA study area surrounds US 78/US 52 (Rivers Avenue) and includes an approximate 0.5-mile radius around Rivers Avenue and Meeting Street to account for known and yet-identified alternative routes. For ease of discussion and evaluation, the NEPA study area is separated into five segments. Evaluating resources throughout the NEPA study area will assist the project team in selecting an alternative that satisfies the LCRT purpose and need while minimizing impacts to the natural and human environment.



BCDCOG **Lowcountry Rapid Transit Project Location**
Data Source: SCDNR, Esri

Study Area

Path: I:\ori-gis01\Data1\BCDCOG_LCRT_20187_2_WIP\Map_Docs\Working\MSpenrath\CCRI\Map_A_P_ProjectLocation_20190215.mxd - User: mspenrath - Date: 2/25/2019

Figure 1 Project Location

1.2 Community Characterization

The CCR and CIA follow FTA guidance on evaluating social and economic impacts, including effects to minority and low-income populations, collectively referred to herein as EJ populations (FTA 2016, 2018). According to FTA, an agency of the United States Department of Transportation (USDOT), transit projects often result in both positive and negative social and economic impacts and may influence community character and development trends. FTA acknowledges that these impacts should be considered in environmental documents. The CCR and CIA employ methodologies presented by the Federal Highway Administration (FHWA), another agency of USDOT, in *Community Impact Assessment: A Quick Reference for Transportation*, herein referred to as CIA guidance (FHWA 2018).

1.2.1 Study Area Description

The CCR study area encompasses approximately 38 square miles situated in southwestern Berkeley County, central Charleston County, and southeastern Dorchester County and overlaps the incorporated boundaries of six municipalities. These municipalities consist of the cities of Goose Creek and Hanahan in Berkeley County; the Town of Lincolville and the cities of Charleston and North Charleston in or largely in Charleston County; and the Town of Summerville largely in Dorchester County. Unincorporated named areas, such as the community of Ladson, also overlap the CCR study area. Like the NEPA study area, the CCR study area is separated into five segments for ease of analysis and presentation (Figure 2).

The CCR study area encompasses many named subdivided neighborhoods, as delineated by BCDCOG or the associated municipality or county (Figure 3; Appendix 1). Insights regarding land use trends and community character in the CCR study area were gained through study of recent aerial photography, making direct field observations, and engaging in conversations with community members and LCRT stakeholders.

The CCR study area overlaps 31 whole United States Census Bureau (USCB) block groups and 70 partial USCB block groups contained within 50 USCB census tracts (Table 1). USCB data were compiled for the block groups to present in detail demographics and economic factors in the CCR study area. These data were also used to identify and characterize EJ populations residing in the CCR study area.

Table 1 USCB Block Groups in the CCR Study Area

Study area segment (total BGs)	Block group				
1 (12)	CT 31.06 BG 1	CT 106.04 BG 1	CT 107 BG 1	CT 207.10 BG 2	
	CT 106.03 BG 1	CT 106.04 BG 2	CT 107 BG 2	CT 207.13 BG 1	
	CT 106.03 BG 2	CT 106.06 BG 1	CT 107 BG 3	CT 207.14 BG 2	
2 (24)	CT 31.06 BG 1	CT 31.14 BG 1	CT 207.10 BG 2	CT 207.15 BG 2	CT 207.21 BG 1
	CT 31.06 BG 2	CT 31.15 BG 1	CT 207.13 BG 1	CT 207.16 BG 1	CT 208.09 BG 1
	CT 31.06 BG 3	CT 31.15 BG 2	CT 207.14 BG 1	CT 207.16 BG 2	CT 208.10 BG 1

Study area segment (total BGs)	Block group				
	CT 31.07 BG 3	CT 31.15 BG 3	CT 207.14 BG 2	CT 207.16 BG 3	CT 209.04 BG 1
	CT 31.13 BG 1	CT 107 BG 3	CT 207.14 BG 3	CT 207.17 BG 3	
3 (40)	CT 31.04 BG 1	CT 31.14 BG 3	CT 34 BG 3	CT 38 BG 2	CT 55 BG 2
	CT 31.04 BG 2	CT 31.15 BG 1	CT 35 BG 3	CT 40 BG 1	CT 209.01 BG 2
	CT 31.05 BG 1	CT 31.15 BG 3	CT 36 BG 2	CT 40 BG 2	CT 209.03 BG 1
	CT 31.05 BG 2	CT 33 BG 1	CT 36 BG 3	CT 40 BG 3	CT 209.03 BG 2
	CT 31.11 BG 1	CT 33 BG 2	CT 37 BG 1	CT 43 BG 1	CT 209.04 BG 1
	CT 31.13 BG 2	CT 33 BG 3	CT 37 BG 2	CT 43 BG 4	CT 209.04 BG 2
	CT 31.14 BG 1	CT 33 BG 4	CT 37 BG 3	CT 44 BG 2	CT 209.04 BG 3
	CT 31.14 BG 2	CT 34 BG 2	CT 38 BG 1	CT 55 BG 1	CT 210 BG 3
4 (12)	CT 16 BG 1	CT 43 BG 2	CT 44 BG 1	CT 54 BG 2	
	CT 16 BG 2	CT 43 BG 3	CT 44 BG 2	CT 54 BG 3	
	CT 43 BG 1	CT 43 BG 4	CT 54 BG 1	CT 55 BG 1	
5 (31)	CT 1 BG 1	CT 6 BG 1	CT 11 BG 1	CT 44 BG 1	CT 53 BG 3
	CT 1 BG 3	CT 7 BG 1	CT 11 BG 2	CT 51 BG 1	CT 54 BG 2
	CT 2 BG 1	CT 7 BG 2	CT 11 BG 3	CT 51 BG 2	CT 54 BG 3
	CT 4 BG 1	CT 9 BG 1	CT 15 BG 1	CT 52 BG 1	
	CT 4 BG 2	CT 9 BG 2	CT 15 BG 2	CT 52 BG 2	
	CT 5 BG 1	CT 10 BG 1	CT 16 BG 1	CT 53 BG 1	
	CT 5 BG 2	CT 10 BG 2	CT 16 BG 2	CT 53 BG 2	

Source: 2017 ACS
 BG = Block Group; CT = Census Tract

As the study proceeds, HDR may refine the CCR study area to consist of the natural community divisions that have developed over time through shared cultural histories, ethnicities, economic strategies, and central concerns or interests of community participants. Entire settlements, such as whole ethnic communities or neighborhoods, will be delineated in order to account for changes in community cohesion. HDR will seek to characterize any transient populations in the CCR study area and any other groups of people who share common characteristics or interests that nurture a sense of unity among the group that are not spatial in nature. Such interests could include religion, culture and ethnicity, class status, shared use of bus or commuter routes, or harvest and consumption of natural resources for personal and family sustenance. HDR will also enhance its consideration of known EJ neighborhoods and may identify additional EJ populations and neighborhoods as the study proceeds. Direct observations, conversations with people who reside in or utilize the study area, and coordination with relevant organizations serving the study area and/or associated populations will help inform CCR refinement.

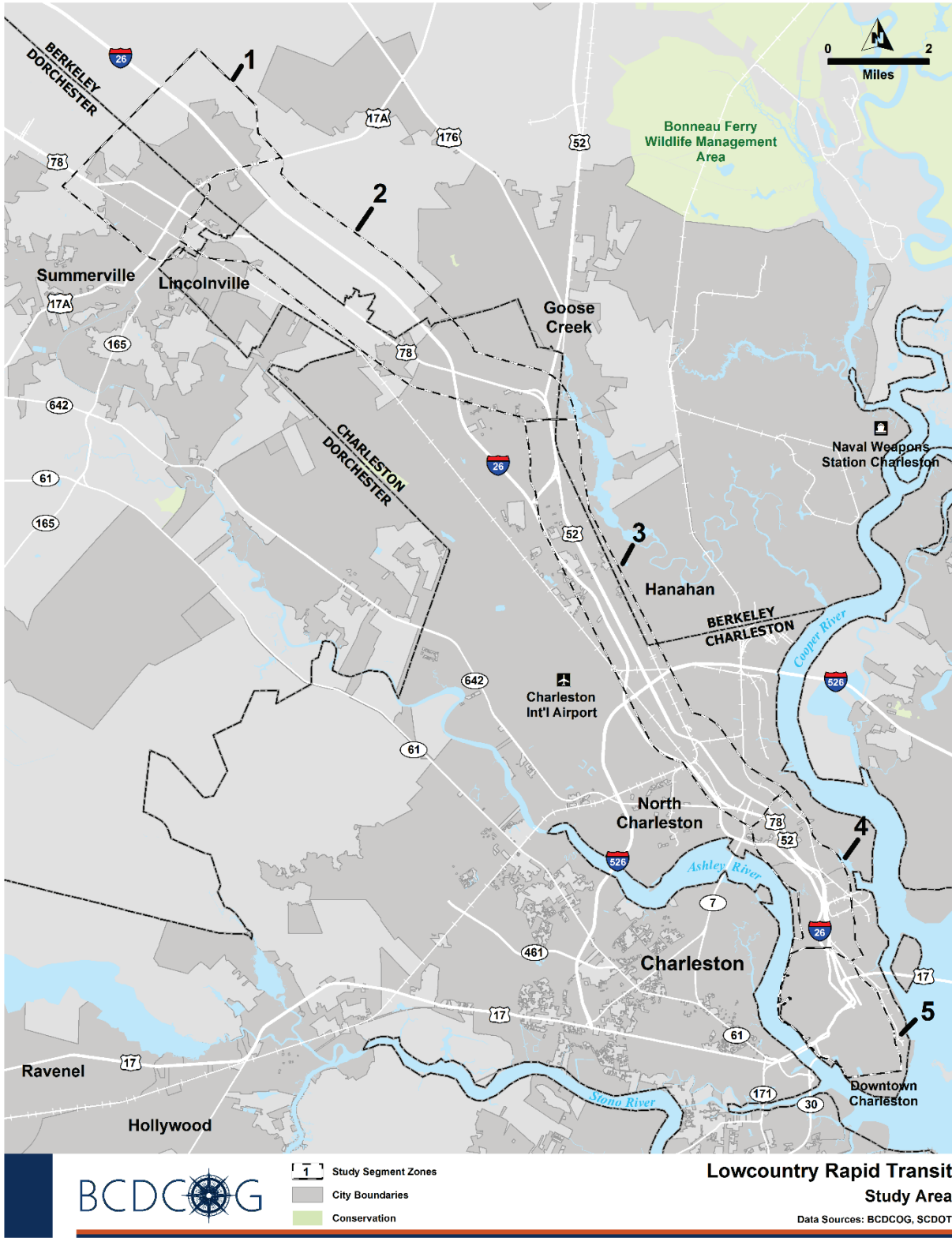


Figure 2 Study Area

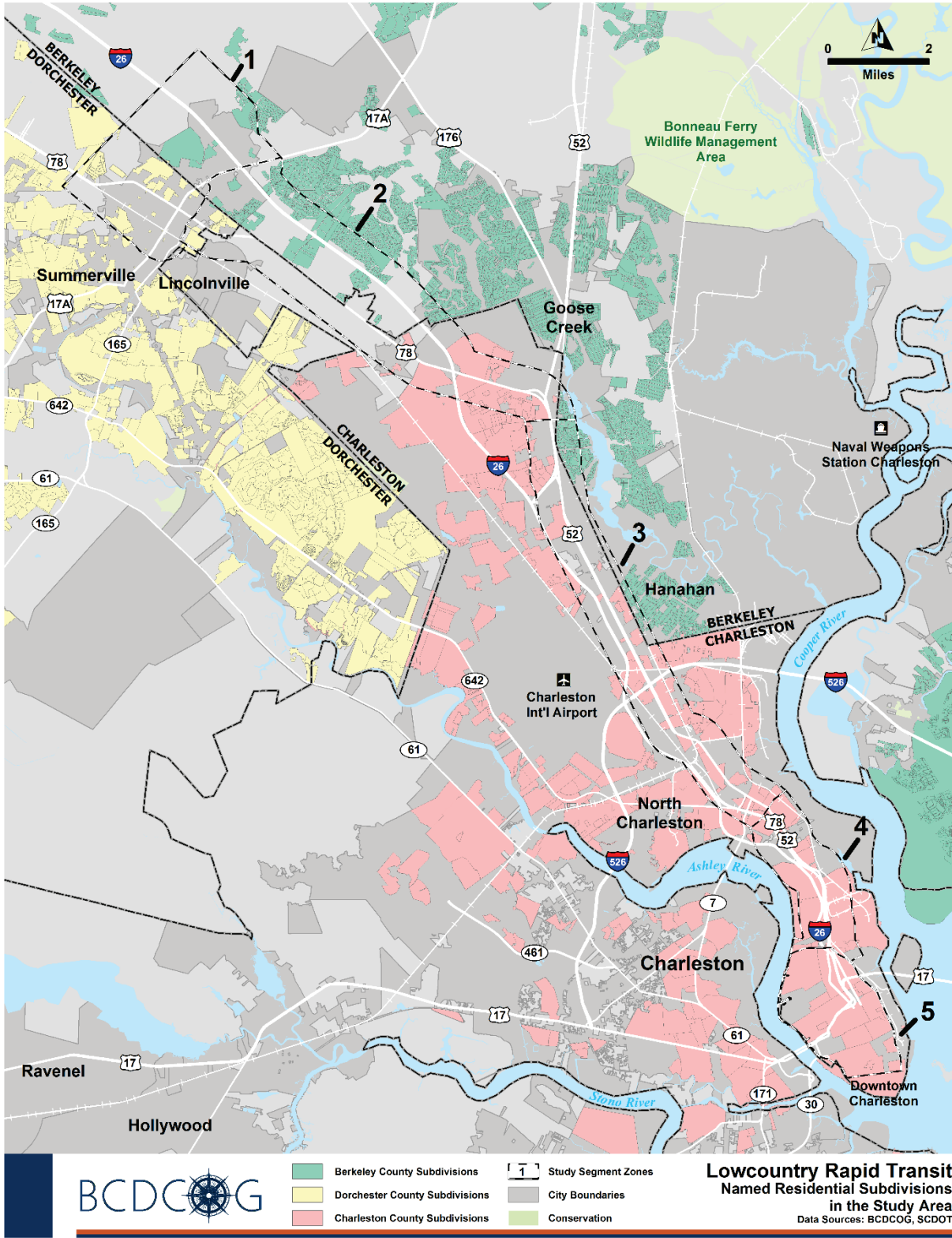


Figure 3 Named Residential Subdivisions in the Study Area

1.2.2 Data Sources and Representation

Depending on availability and comparability, USCB data derived from the 2010 Decennial Census (2010 Census) and the most current, complete datasets of the 2013–2017 five-year estimates of the American Community Survey (2017 ACS). These data were obtained utilizing USCB databases and products, consisting of American FactFinder and TIGER Products (USCB 2019a, 2019b).

Whenever possible, USCB block group data, rather than census tract, were used to characterize the CCR study area due to being the most detailed geography represented in the 2017 ACS. When block group-level data were not available, census tract data were utilized. Spatial data for figures displaying census data were obtained through USCB TIGER products. USCB data assigned to block groups and census tracts are presented in proportion to the area their associated geography overlaps the CCR study area. This approach allowed for a more accurate representation of socioeconomics and EJ factors in the study area. Medians reported for the entire study area and each segment were factored from the medians reported for relevant USCB geographies in the study area. Employment and economic factors used to characterize segments in the study area are presented based on data calculated from census tracts due to availability.

Other quantitative and qualitative data were gathered from BCDCOG, associated counties and municipalities, stakeholder organizations, and other relevant sources as cited. As noted above, direct observations, conversations with study area residents and stakeholders, and coordination with relevant organizations also served as sources of information for the CCR and CIA.

1.3 Environmental Justice

FTA's consideration of EJ is founded on Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (FTA 2012). EO 12898 directs each federal agency, including FTA, to make EJ part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on EJ populations. DOT Order 5610.2(a), *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (DOT Order) also informs how FTA addresses EJ. The DOT Order establishes policy to integrate EJ principles into DOT planning, programming, rulemaking, and policy formation. In considering EJ, the CCR and CIA specifically follow FTA's *Environmental Justice Policy Guidance for Federal Transit Administration Recipients* (FTA C 4703.1). As with other federal agencies, FTA follows the President's Council on Environmental Quality (CEQ) guidance for applying EO 12898 under NEPA, entitled *Environmental Justice: Guidance Under the National Environmental Policy Act* (CEQ Guidance; CEQ 1997).

CEQ Guidance directs identification of minority populations when either the minority population of the affected area exceeds 50 percent or the minority population percentage of the study area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). CEQ defines minority populations as people who identify themselves as Asian or Pacific Islander, American Indian or Alaskan Native, Black (not of Hispanic origin), or Hispanic. Due to necessarily including one of these minorities,

those indicating two or more races are also considered minorities. The study area segments and USCB geographies with minority populations exceeding the 50-percent threshold were presented as the portions of the CCR study area where the chance for disproportional environmental and human health effects may be the greatest. Minority populations were identified among study area segments and USCB block groups using the 2017 ACS.

CEQ Guidance specifies that low-income populations are to be identified using the annual statistical poverty threshold from the USCB Current Population Reports Series P-60 on Income and Poverty. The USCB-provided 2017 poverty threshold for individuals under age 65 was \$12,752, and the official poverty rate for the United States (U.S.) as a whole in 2017 was 12.3 percent (USCB 2018). Low-income populations were defined as those with poverty rates above the U.S. poverty rate of 12.3 percent. Those areas with poverty rates above the CCR study area rate of 23.7 are noted as having the potential for higher chance for disproportional environmental and human health effects from the Project. Low-income populations were identified among study area segments and USCB census tracts using the 2017 ACS.

Per CEQ Guidance, minority and low-income populations may also be scattered groups or individuals sharing common conditions that are not spatial in nature and/or groups demonstrating differential patterns of consumption of natural resources among minority and low-income populations. As such, HDR may identify additional EJ populations as the community characterization study proceeds.

1.4 Limited English Proficiency

Pursuant to Title VI of the Civil Rights Act of 1964 (42 USC § 2000d et seq.), U.S. Department of Justice (USDOJ) Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons [DOJ LEP Guidance; Federal Register 67(117):41455-41472, June 18, 2002], and EO 13166 [Federal Register 65(159):50121-50122, August 16, 2000], the Limited English Proficiency (LEP) population was assessed for the study area region and the immediate CCR study area using the 2017 ACS. DOJ LEP Guidance advises recipients of DOJ funds to provide “written translations of vital documents for each eligible LEP language group that constitutes five percent or 1,000, whichever is less, of the population of persons eligible to be served or likely to be affected or encountered” [Federal Register 67(117):41463-41464, June 18, 2002]. This is referred to herein as the DOJ LEP threshold. Eligible LEP language groups are those whose members self-report speaking English less than very well.

2 Regional Context

This section summarizes the regional context of the study area. An overview of significant aspects of the area’s history and culture; relevant details in regional, county, and organizational plans and initiatives; a description of the transportation network near the LCRT; and regional economic, employment, and socioeconomic data are all presented in this section.

Portions of this section derive from Baluha and Kittrell (2019), *Phase I Cultural Resources Reconnaissance, Lowcountry Rapid Transit Project, Berkeley, Charleston, and Dorchester Counties, South Carolina*. This source should be accessed for a more complete historical

context of the study area, including more specifics on the development of the City of Charleston and Summerville.

2.1 History

Early settlers in the Carolina Lowcountry were an integral part of wide-ranging disputes and rivalries among the English, Spanish, Native Americans, and enslaved Africans. These disputes and rivalries encompassed nearly all of the Lowcountry, an area that spanned hundreds of miles from Georgetown, South Carolina, to northern Florida. The Spanish had routed the French in East Florida in 1565, and established a settlement at what is now St. Augustine. This Spanish presence was a continual threat to the English settlers, particularly after the 1670s, when Spain learned of the Charles Towne settlement.

King Charles II of England disregarded Spain's claim to the region, and in 1663, he granted Carolina to the Lords Proprietors. The next year, a group of Barbados planters hired William Hilton to explore the acquisition. He spent over a month in the waters of both Port Royal and St. Ellens, leaving with a high opinion of the area's potential as a colony. Prompted by the account of tall pines and good soils, a small colony set out for Port Royal. Tales of hostile tribes convinced them to move farther north, though, where they founded Charles Towne in 1670 on the Ashley River at Albemarle Point (today's Charles Towne Landing State Historic Site) (Holmgren 1959:39). One of the first orders of business for the settlers was initiating trade with the native tribes as a way of ensuring both economic and physical survival (Covington 1978:9).

In 1680, Charles Towne moved to Oyster Point on the peninsula where the core of the modern City of Charleston rests today. A series of large land grants beginning in 1698 signaled a renewed interest in settling Port Royal (Holmgren 1959:42). When the town of Beaufort was chartered in 1711, the Yamasee had 10 villages in what are now Beaufort and Jasper counties. Angered by mistreatment from traders, the Native Americans attacked in the Yamasee War in 1715, but did not succeed in dislodging the English (Covington 1978:12). At the time, the war was blamed on Spanish influence from Florida; however, a more likely cause was the English traders' practice of seizing Native American women and children and holding them as slaves to meet tribal debts.

The conclusion of the Yamasee War also made settlement in the Charleston vicinity easier. The early economic development in the Wando Basin near Charleston initially focused on tribal trade. Trade with the Native Americans was pursued aggressively through the beginning of the eighteenth century, but by 1716 conflicts with the Europeans and disease had drastically reduced or displaced the local native population. As a result, naval stores and agricultural industries soon replaced the furs and other local commodities acquired from the aboriginal inhabitants of the region. However, trade with the interior Catawba and Cherokee would continue throughout the eighteenth century.

Charles Towne was settled under the proprietary system and did not become a royal colony until 1719. The new colony was organized into three arbitrary counties: Berkeley, Colleton, and Granville. Early economic development in the region focused on Indian trade and naval stores production. Trade with the Indians was aggressively pursued through the beginning of the eighteenth century, but by 1716, conflicts with the Europeans, followed by disease, had

drastically reduced or displaced the local native population. Trade with the native groups located farther inland continued until the end of the eighteenth century. Naval stores production also flourished for a short period with the encouragement of bounties provided by the crown. However, England failed to recognize the extensive supplies of the pinelands on the Carolina coastal strand, and the production of naval stores quickly surpassed demand (Rogers 1984). The ending of a bounty on South Carolina–produced supplies caused the production of naval stores to decline rapidly by the end of the 1720s.

Although the *Fundamental Constitutions* promised religious tolerance, it still named the Church of England “the only true and orthodox” church in South Carolina (Dalcho 1820:4). This was reinforced by the Establishment Act of 1704 and the Church Act of 1706. These acts created the first seven Anglican parishes and called for the construction of six new Anglican churches (Cooper 1837:232-235, 281-282). Early on, the CCR study area extended from St. Phillips Parish, which covered Charles Towne and the peninsula, to St. Andrew’s Parish, which included lands along the Ashley River, and St. James Goose Creek, which included lands along the Cooper River. Later population growth necessitated St. Andrew’s Parish to split, with the western half forming St. George’s Parish in 1717. Likewise, in 1751, St. Phillips Parish split into St. Michael’s and St. Phillips parishes, with St. Michael’s Parish extending along the western margin of the peninsula.

After 1720, the economy of South Carolina shifted to farming and stock husbandry. By that time, planters were establishing their plantations well beyond the immediate Charles Towne area and expanding northwards to the Santee River and southwards to the Edisto River. By this date, rice accounted for half the colony’s profits, and its importance continued to grow over the next 140 years. The introduction of indigo as a cash crop complemented rice in the middle to late eighteenth century. While rice production was restricted to the freshwater swamps and later to the river marshes, indigo grew best in well-drained upland soils. Cotton did not become an important crop in South Carolina until the last decade of the eighteenth century. Plantations along the Goose Creek watershed focused on the production of these crops.

Indigo was first grown in the colony in 1740, and its introduction to the colony is traditionally attributed to the Pinckney family. In 1744, the Pinckneys gave small quantities of the seed to many local planters, and, spurred by the successful cultivation efforts of Eliza Pinckney, indigo soon became a common and very profitable crop. Some planters were able to double their capital investment every three to four years. The volume of exports reached its peak in 1755, when 303,531 pounds of indigo blocks were exported from Charleston. England was the major market for indigo grown and processed in South Carolina; however, the industry declined after the American Revolution (Pinckney 1976).

The plantation economy of the lower southern colonies came directly from the West Indies, where enslaved Africans were employed on sugar plantations as well as in all aspects of the economy. South Carolina was no exception; from fieldworkers to artisans to ferryboat operators, slaves were present in all facets of public and private life. With the settlement of the study area, enslaved Africans initially participated in ranching and naval stores production, and later built the infrastructure for inland rice. Across the Lowcountry, the development of the plantation

culture greatly influenced the lives of African Americans. Many archaeological and historical studies have examined slave settlements on Lowcountry plantations. Rather than portraying enslaved Africans as victims of the economic system, several historians have examined the social and cultural institutions and material culture that slaves produced and that were integrated into the white culture (Joyner 1984; Thornton 1992; Vlach 1993). These range from African- and Caribbean-influenced architecture on the plantations, to the development of Christian denominations, to the introduction of foodways, to the African influence on the development of rice production.

Rice and cotton agriculture continued to drive the economy of St. James Goose Creek Parish during the first half of the nineteenth century. These crops were grown primarily on large plantations worked by slave labor. This mode of production continued until the Civil War (1861–1865). Emancipation of the slaves and the dissection and redistribution of some plantations at the end of the war effectively destroyed the plantation system of production. After the war, large-scale agriculture became more expensive and many large plantations fell into disrepair. Laborers left the large plantations to take jobs in the state’s growing textile industry in the Piedmont or in the phosphate mines along the coast. Many landowners continued to farm on a smaller scale, and forest products again became important economically.

The advent of phosphate mining in the late 1860s benefited plantations in northern Charleston and lower Dorchester (then Colleton) counties. It was a short-lived industry, however, and did not produce any changes in the class structure or race relations that developed as a result of the plantation agricultural system in the region (Shick and Doyle 1985:2-4; Shuler et al. 2006:45). Even though mining created a large demand for wage laborers, the many African Americans who were hired were under the control of white bosses. The company provided housing, medical services, and general stores to the miners, with payment extracted from each worker’s wages. Since the usual wage was between \$3.50 and \$7.50 per month, most miners were always in debt to the company (Shick and Doyle 1985:13).

By the early twentieth century, many South Carolina phosphate mines were depleted, and companies closed due to increased competition from mines in Tennessee and Florida. To offset the losses, planters turned once again to logging and added large-scale truck farming. This represented a shift in the use of arable land in old St. James Goose Creek, in what was now Charleston County (Stauffer 1993:17). County boundaries in this area of Charleston County were inconsistent, especially after the creation of new Berkeley County in 1881.

Beginning after World War I, the labor demands of the industries in the Charleston area brought new residents into the region. Some arrivals settled in the area of old St. James Goose Creek Parish and greatly increased the population in and around the town of Summerville. This continued for the decades following the end of World War II as Charleston, Summerville, and the new town of Goose Creek witnessed a continued influx of suburban residents into its outlying areas, with the ancillary development of service facilities and industries for these residents.

2.2 Local Plans and Initiatives

This section presents details in regional, county-, municipal-, and local-level plans and initiatives relevant to the LCRT project. These plans and initiatives are summarized for BCDCOG, Berkeley County, Charleston County, Dorchester County, and the six municipalities in the CCR study area, including the City of Charleston, the City of North Charleston, the Town of Lincolnville, the Town of Summerville, the City of Hanahan, and the City of Goose Creek. Two plans from the Lowcountry Alliance for Model Communities (LAMC), an organization addressing concerns for several neighborhoods in North Charleston, are also summarized. Figure 4 shows current land use across the CCR study area to give context to the plan discussion.

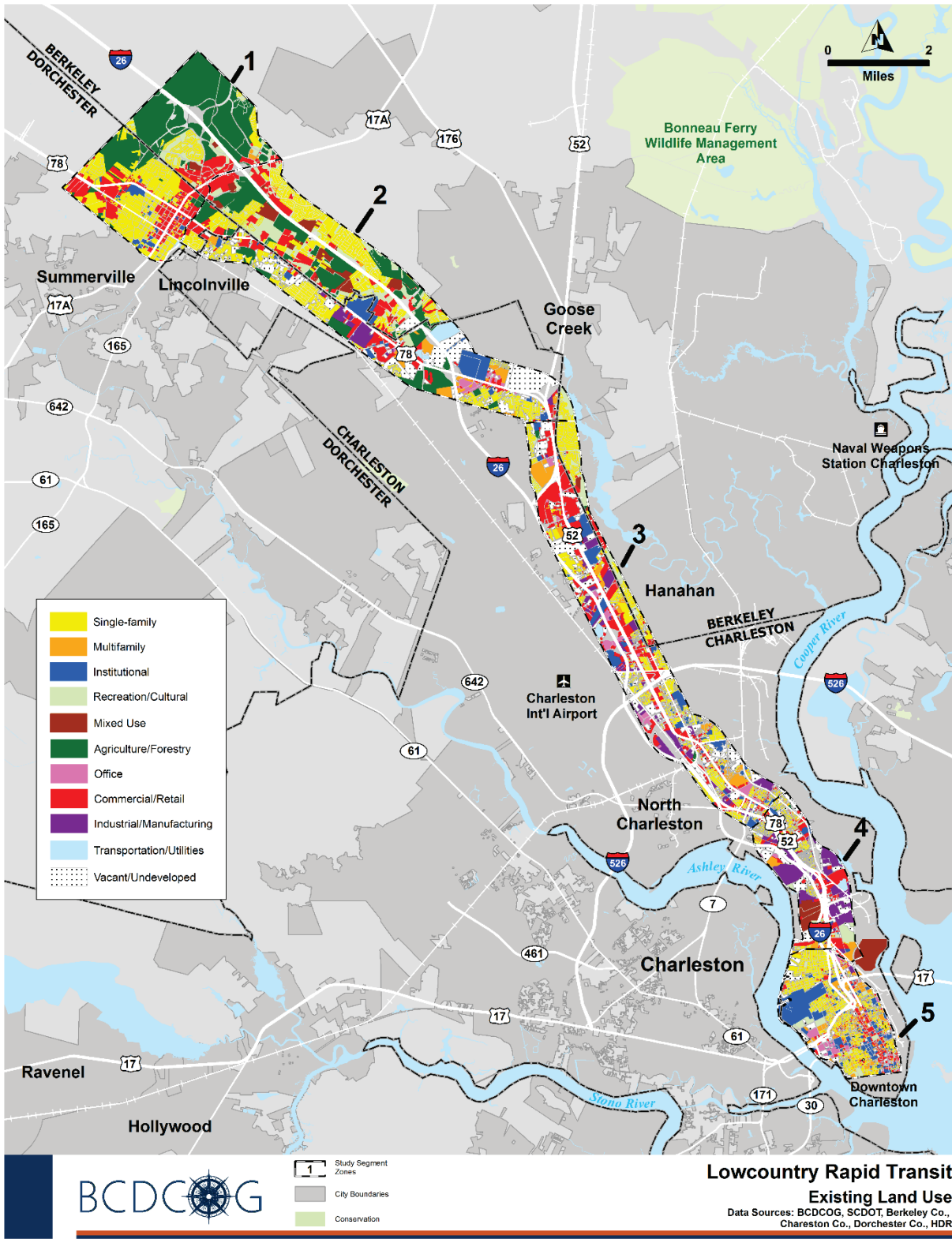


Figure 4 Existing Land Use

2.2.1 BCDCOG

BCDCOG serves as both the Regional Planning Council and the Metropolitan Planning Organization for Berkeley, Charleston, and Dorchester counties (BCDCOG 2012). BCDCOG administers federal community and economic development grants; coordinates environmental, land use and transportation planning; and, through its programs, helps reduce duplication across the three counties and their participating municipalities. One of the key functions of BCDCOG is its transportation planning responsibilities, particularly in relation to public, freight, intermodal, and multimodal transportation and congestion issues across the region.

BCDCOG's *Our Region Our Plan* (OROP) recognizes that the region will continue to experience substantial population growth and presents a "framework for future growth, development and infrastructure improvements" developed from data collected through community workshops and public forums (BCDCOG 2012). OROP envisions future land use patterns similar to traditional Lowcountry patterns: activity centers framed by natural areas with corridors connecting these spaces. OROP indicates that continued population growth presents challenges such as preserving the region's natural resources, maintaining affordable housing, and providing reasonable mobility options that lessen environmental impacts and lost productivity. Strategies to help overcome these challenges include:

- Encouraging mixed-use, compact development within existing activity centers and coordinating transportation planning and land use to allow for natural areas interspersed between human developments
- Increasing employment and educational opportunities in professional, high-tech fields to help support the region economically
- Creating a robust transportation system, to include freight and transit, that supports communities and nurtures businesses

BCDCOG's OROP prioritizes infrastructure investments such as transit and serves as a "Vision Plan" for the tri-county region. The plan envisions a more efficient and comprehensive regional transit system that may include such modes as light rail, BRT, and/or ferry service across the Cooper and Ashley rivers, as well as continued long-distance Amtrak service. Commuter or light rail service is favored along the I-26 corridor in an effort to connect more residential communities with the commercial centers in the region. Express bus service or BRT could serve a similar purpose and could be built to connect downtown Charleston with Moncks Corner and/or Moncks Corner with East Edisto or could traverse the area via the Mark Clark Expressway and, thus, connect Mount Pleasant with Johns Island. OROP indicates that BRT or another express bus service would be the more flexible option, as service routes could be modified to serve future developments or destinations (BCDCOG 2012).

BCDCOG's CHATS 2040 Long-Range Transportation Plan (LRTP) addresses regional transportation needs through continuous coordination with representatives of numerous stakeholders in the study area, including:

- CHATS Metropolitan Planning Organization
- Cities of Charleston and North Charleston
- Towns of Summerville and Lincolnville

- Berkeley, Dorchester, and Charleston counties
- Various local, regional, state, and federal agencies, including the local transit authorities (Charleston Regional Transportation Authority [CARTA] and TriCounty Link [TCL]), South Carolina Department of Transportation, FTA, and FHWA (BCDCOG 2018).

The LRTP identifies specific and general transportation system improvement recommendations and strategies to accommodate future transportation demands while promoting safety and efficiency. This plan supports a multimodal transportation system that addresses the economic, social, and environmental needs of the Berkeley-Charleston-Dorchester county region by assessing not only automobile accessibility, but also freight, bicyclist, pedestrian, and transit components of the system. Public transit is a major component of the LRTP, and the LCRT, with an implementation horizon of 2020-2030, is one of the featured projects.

The LRTP recommends the following transportation improvement projects near the CCR study area:

- Berlin Myers Parkway (Phase III), SC Highway (SC) 165 to US 17A
- College Park Road, US 17A to Corporate Parkway
- Intersection safety improvements at I-26 and Montague Avenue
- I-526 widening and interchange improvements from Exit 18 (near Rivers Avenue) to Exit 30 (near US 17)
- I-26 widening from Exit 194 (near Jedburg Road) to Exit 197 (near Nexton Parkway)
- I-26/I-526 Interchange Improvements

The Phase III Berlin Myers Parkway project would extend Berlin Myers Parkway from its current terminus at SC 165 to a new terminus at US 17A. Modifications to College Park Road would include widening the road to five lanes with bicycle and pedestrian accommodations, along with intersection improvements from US 17A to Corporate Parkway. Intersection safety improvements at I-26 and Montague Avenue would result in additional roadway capacity along Montague Avenue between I-26 and International Boulevard. I-526 widening and interchange improvements would provide additional travel lanes and interchange improvements along an approximate 12-mile corridor extending between Exits 18 and 30. I-26 widening between Exits 194 and 197 would result in additional travel lanes along an approximate 3-mile length of roadway. I-26/I-526 interchange improvements are associated with I-526 widening and improvements between Exits 18 and 30 and would improve traffic flow and safety at this major interchange.

The LRTP identifies a number of recommended pedestrian trails and bicycle lanes in the CCR study area along and intersecting with US 52 and US 78. *Walk+Bike BCD-Planning for a Walkable and Bikeable Region*, the regional active transportation master plan for the tri-county area, provides the basis for identifying where walking and biking investments should be directed in the CHATS planning area (BCDCOG 2017). This plan is discussed in Section 2.3, Transportation, below.

2.2.2 Berkeley County

The northern portion of the CCR study area is located in Berkeley County. This large county is located north of Charleston County, extending north-south between St. Stephen and Daniel Island. While much of Berkeley County is rural in character, the CCR study area is largely located in the more urban, southwest portion of the county that includes small portions of Summerville and unincorporated Ladson.

The *2010 Berkeley County Comprehensive Plan* (BCCP; Berkeley County 2010) was intended to identify the positive attributes and components that define Berkeley County, while guiding growth and development for the next 15 to 20 years. The BCCP delineates a Principal Growth Area (PGA) that partially overlaps the CCR study area and includes larger incorporated towns and some rural areas experiencing transitional development west of US 17A. The BCCP envisions development of the PGA focused around existing and identified town centers and emphasizes infill and redevelopment of land within the PGA to promote accessible activity centers with connections to nearby neighborhoods.

A number of projects for infrastructure and capital facilities, including enhanced transit, are contained in the adopted CHATS LRTP and Capital Improvements Program for Berkeley County. The Plan envisions improved public transit as a development incentive and a means to equalize access to jobs and amenities.

Goose Creek

The City of Goose Creek in Berkeley County updated their comprehensive plan in 2015 (City of Goose Creek 2015). The plan relates long-range objectives to a number of interdependent elements and incremental changes, including population trends and characteristics, housing, economic development, transportation networks, community facilities, land use, natural environment, and many other factors that impact the quality of life for current and future Goose Creek residents. The purpose of the plan is to describe visions for the City's future, as developed through a public process that involved stakeholders, community leaders, and interested members of the public. The plan establishes a set of guidelines and procedures for use by decision-makers including government agencies, residents, private developers, property owners and private organizations concerned with guiding development and preserving the City's natural and cultural resources (City of Goose Creek 2015).

Hanahan

On November 20, 2018, the Planning Commission for the City of Hanahan in Berkeley County hosted a public meeting to discuss its proposed draft of the 2018 Comprehensive Plan Update. This document will be an update to the 10-year comprehensive plan adopted by City Council in 2012. For the update, all data was made current concerning changing variables such as demographics, economic development, and housing. Additionally, significant projects, company relocations, and new public facilities completed since 2012 were applied to this document (City of Hanahan 2019a).

2.2.3 Charleston County

The majority of the CCR study area is located in Charleston County. The county is centrally located along the Atlantic coast of South Carolina, extending north-south between McClellanville

and Edisto Island. While much of Charleston County is rural in character, the CCR study area is largely located in the more urban, central/central-northern portion of the county that includes Lincolntonville, Ladson (an unincorporated area that is also partly located in Berkeley and Dorchester counties), downtown Charleston, and North Charleston. Small portions of Summerville are also in the Charleston County portion of the CCR study area, but recent planning activity for this municipality is discussed in Section 2.2.4, Dorchester County ,below.

The *2018 Charleston County Comprehensive Plan* (CCCP; Charleston County Council 2018) covers the majority of the project study area. The CCCP presents particular elements designed to accomplish the county’s vision regarding the pattern, quality, and intensity of land uses; the provision of public facilities and services; economic development; availability of housing; and preservation of natural and cultural resources. The CCCP places an emphasis for growth to occur within the Urban Growth Boundary (UGB), an area overlapping the CCR study area where substantial infrastructure and services exist. The CCCP encourages compact growth in already developed areas, redevelopment, and infill of existing vacant sites inside the UGB, particularly where employment and residential density are the greatest, and discourages development in low-growth areas. The CCCP promotes intermodal transportation systems such as Park-and-Ride facilities, walking and bicycling paths, and BRT. Specifically, the CCCP mentions that, as a result of the BCDCOG-led 15-month study to identify a transit alternative to enhance regional mobility along the I-26 corridor between Summerville and Charleston, BRT along the Rivers Avenue corridor (i.e., the Project) was recommended to provide this need.

Charleston

The City of Charleston in Charleston County has a number of plans relevant to the study area, including *The Charleston Downtown Plan: Achieving Balance Through Strategic Growth* (City of Charleston 1999), the *Charleston Neck Plan* (City of Charleston 2003), *The Century V City Plan* (City of Charleston 2010a), and the *Special Area Plan: Calhoun Street-East/Cooper River Waterfront* (City of Charleston 2010b).

The 1999 *Charleston Downtown Plan: Achieving Balance Through Strategic Growth* (City of Charleston 1999) recommends a balanced and coordinated strategy for the next twenty years. The key of the plan is to transcend the boundaries of individual issues and neighborhoods to deal with the downtown holistically. The premise underpinning the Downtown plan is that appropriately directed, new growth can enhance the social, economic and community amenities for existing and future residents.

The purpose of the 2003 *Charleston Neck Plan* (City of Charleston 2003) is to provide a framework for physical development in the Charleston Neck area, defined as the area north of Mt. Pleasant Street and northeast of Morrison Drive. This area, which covers 5.93 square miles (3,795 acres), includes viable heavy industrial property to small single-family neighborhoods. The plan includes three key sections: 1) the Urban Plan, 2) a Zoning Strategy, and 3) an Implementation Strategy.

The 2010 *Century V City Plan* (City of Charleston 2010a) is a working document created for the citizens of Charleston that articulates the visions and goals of the city. The plan provides the basis for making decisions related to natural and cultural resources, economic development,

public safety and services, land use and preservation, transportation options, and planning coordination.

The 2010 *Special Area Plan: Calhoun Street-East/Cooper River Waterfront* (City of Charleston 2010b) is a plan that aims to create a mixed-use neighborhood in former industrial areas along the Cooper River waterfront east of East Bay Street. The Calhoun Street corridor leading to the riverfront will serve as the primary gateway from King and Meeting streets to the Cooper River and should be aesthetically improved to be more similar to downtown streets such as Broad and King streets.

North Charleston

In 2015, the City of North Charleston, primarily in Charleston County, updated their 2008 comprehensive plan (City of North Charleston 2015). The comprehensive plan inventories and assesses existing conditions in the community, determines future needs, and sets goals, policies, and implementation strategies for the future. The plan also provides the Future Land Use Map from which zoning and development decisions are based. The plan guides North Charleston in its arrangement of land uses, transportation systems, and support facilities and also helps to address and retain support for the key natural resources and cultural assets that characterize the City. In addition, the plan helps the City meet housing, public service and facility needs as it continues to grow and develop. Similarly, the plan sets guidelines and strategies for redeveloping older areas of the City that declined in population and investment over the years and ensures that new development considers the natural environment and does not overburden the transportation system or public services. Finally, the plan aims to help North Charleston grow and develop in a sustainable fashion, meeting the needs of current generations while ensuring the opportunity for future generations to enjoy the same resources and quality of life (City of North Charleston 2015). In 2018, the City began the process of developing a long-range strategic plan that will replace the 2015 comprehensive plan update (City of North Charleston 2019a).

In 2005, seven African-American neighborhoods in the City of North Charleston organized LAMC as a grassroots comprehensive planning effort (AECOM 2010). The LAMC neighborhoods, as they are herein referred, consist of Accabee, Chicora/Cherokee (sometimes called Charleston Heights), Five Mile, Howard Heights, Liberty Hill, Union Heights, and Windsor. As part of the environmental review process for a proposed port terminal expansion, the U.S. Army Corps of Engineers (USACE) determined that the populations of these neighborhoods met EJ criteria, and LAMC representatives demonstrated that each neighborhood has borne a disproportionate share of negative environmental effects in the local area.

LAMC produced the *LAMC Area Revitalization Plan* in 2010 to help mitigate impacts from the proposed port terminal expansion and ensure that maximum community benefits were secured (AECOM 2010). The plan acknowledges that most residential streets in LAMC neighborhoods lack sidewalks and bicycle lanes and have limited shoulder areas that could be used for these alternate travel modes. The neighborhoods are supported by eight CARTA bus routes and have good access to the North Charleston “SuperStop,” a central stop and transfer hub at the intersection of Cosgrove and Rivers avenues. The plan envisions the future of the LAMC

neighborhoods in regards to future land use and presents a set of actions to help turn conceptual projects into reality (AECOM 2010). Major corridor improvements are proposed on Rivers, Spruill, McMillan, and Cosgrove avenues. Along these roadways, mostly within existing right-of-way, the plan proposes improvements to maintain vehicular mobility, enhance pedestrian access and safety, facilitate bicycle travel, and improve the appearance of streetscapes in these areas.

In 2018, LAMC released the *Community Action Plan for Union Heights, North Charleston, South Carolina* (EPA and LAMC 2018). Union Heights, one the LAMC neighborhoods, was founded by emancipated African Americans in the Reconstruction Period after the Civil War. While recent economic activities in the area present opportunities for Union Heights' residents, increasing property values and displacement of long-time residents are threatening these. In part to address these issues, LAMC began coordination with Cavalry African Methodist Episcopal (AME) Church in 2017 to develop a quarter-mile long property owned by the church between Meeting and King streets and a set of railroad tracks. The property has been underused over many years, while also serving as a place where construction and other waste were deposited. The plan envisions the property as a community asset that supports food access, health, and vitality.

2.2.4 Dorchester County

The northern portion of the CCR study area is located in Dorchester County. Dorchester County is located north of Charleston County and west of Berkeley County, extending north-south between Harleyville and rural areas north of Rantowles (Charleston County). While much of Berkeley County is rural in character, the CCR study area is largely located in the more urban, southwest portion of the county that includes small portions of Summerville and unincorporated Ladson.

The *Dorchester County Comprehensive Plan 2008* (Dorchester County Council 2008) sets forth a vision for Dorchester County through the year 2030. The seven themes that drove the planning process include future land use, infrastructure concurrency, transportation, economic development, workforce housing, priority investment areas, and community design. There is no mention of BRT in the Transportation section of the comprehensive plan.

Summerville

In 2011, the Town of Summerville released their *Town of Summerville Comprehensive Plan Update 2009-2011*. The plan covers long-range objectives for a number of factors, including future land use, transportation system design, natural resources, energy, housing, and communities (Town of Summerville 2011). Summerville also has a new revised draft of the Unified Development Ordinance. Both the Town's Comprehensive Plan and Vision Plan acknowledged the need for substantial changes to the Town's zoning and development ordinances. The Town desires to establish clear, responsible development regulations with appropriate design criteria that will provide opportunities for innovative and creative approaches to development while supporting an economically viable and sustainable community (Town of Summerville 2018).

2.3 Transportation

This section presents details related to the transportation network in and near the CCR study area. The regional network includes travel by personal vehicle, public transit, bicycle, foot, water, plane, and train.

2.3.1 Roadway Network

The roadway network in the CCR study area includes four US routes (US 52, US 78, I-26, and US 17A), three state highways (SC 165, SC 642, and SC 7), and a number of local roadways including Ladson Road, Remount Road, East Montague Avenue, and Calhoun Street; both local and regional commuters use these roadways. US 52 and US 78 traverse the study area as the main northwest to southeast route. US 52 and US 78 share an alignment from their intersection in North Charleston (this section is known as Rivers Avenue) southward until they diverge again, at which point US 52 becomes Carner Avenue and then Meeting Street and US 78 becomes King Street Extension.

US 52 travels in a northeast to southwest route through the southern portion of the study area. In the study area, US 52 links Charleston to North Charleston and North Charleston to Goose Creek. US 78 travels in a general northwest to southeast route extending the length of the study area. In the study area, US 78 provides a connection between Charleston, North Charleston, Ladson, Lincolnville, and Summerville. I-26 travels in a northwest to southeast route, generally along the western edge of the study area, linking Charleston and Orangeburg. US 17A travels in a general northeast to southwest direction in the northern portion of the study area. Outside the study area, US 17A links Summerville to several smaller communities to the northeast and southwest.

2.3.2 Public Transit

The Berkeley Charleston Dorchester Region's two transit agencies, CARTA and TCL, coordinate their routes and scheduling to provide an interregional transit connection for transit patrons in and around the study area. CARTA provides local, express, and neighborhood bus service within the urban and suburban areas of the Berkeley-Charleston-Dorchester region. In Charleston County, CARTA provides service in and between North Charleston, Charleston, Mount Pleasant, West Ashley, and James Island. CARTA has regular routes that travel to major destinations and DASH service that provides free bus transportation in the downtown area. A Tel-A-Ride Service provides curb-to-curb service for residents who meet the Americans with Disabilities Act (ADA) Certification Requirements (Charleston County Council 2018).

TCL provides rural bus service to Berkeley, Charleston, and Dorchester Counties. The current fleet consists of 49 vehicles that seat from 14 to 32 passengers. All TCL vehicles are ADA compliant and include wheelchair lifts. In Charleston County, three TCL bus routes serve the western portion of the county, including Johns, Kiawah, Seabrook, and Edisto islands, as well as the towns of Meggett, Hollywood, and Ravenel. Two routes serve the eastern part of the county and extend into the towns of Awendaw and McClellanville. Commuter routes are also available through TCL (Charleston County Council 2018).

BCDCOG sponsored a route study for TCL in 2014 to review the existing TCL route network and provide recommendations for optimizing service to better serve the needs of the

communities in which it operates. The study offered near-term and long-term recommendations for modifying existing service and adding new routes, along with policy recommendations concerning planning, capital, and organizational issues. Key recommendations included adding four new routes, eliminating three routes, modifying alignments and/or schedules of six routes, and making capital investments in bus stop signage and amenities (BCDCOG 2018).

Within the CCR study area, CARTA's northernmost route begins at the intersection of US 78 and I-26 in North Charleston. US 52/US 78 is the main central north to south corridor, connecting area residents between North Charleston and Charleston, with many bus stops and side routes along this main corridor (CARTA 2019). The "SuperStop" is located at the intersection of US 52/US 78 (Rivers Avenue) and SC 7 (Cosgrove Avenue) in North Charleston.

In 2016, BCDCOG completed a Comprehensive Operations Analysis (COA) of the existing CARTA transit system. The objectives were to enhance reliability, increase efficiency, respond to changing travel patterns, and provide the foundation for future investments in upgraded equipment, facilities, and system expansions (BCDCOG 2018). Recommendations to be completed in the short-term included route realignments, schedule adjustments, and route elimination. Longer-term recommendations were proposed for a 5- to 10-year implementation horizon in conjunction with the proposed LCRT project along US78/Rivers Avenue (BCDCOG 2018).

Based on public and stakeholder input on the LRTP, expanded commuter service from more parking facilities was mentioned as a need to connect residential areas with employment centers, which could also help alleviate parking challenges downtown (BCDCOG 2018). A new park-and-ride facility, known as the Hospitality on Peninsula Park and Ride Lot and Shuttle, or the HOP, was launched in the study area in April 2018. The HOP, located at 999 Morrison Drive, is targeted to workers in the area's vibrant hospitality and food and beverage industries; however, the HOP is open to all commuters as a way to mitigate parking challenges (CARTA 2019).

2.3.3 Pedestrian and Bicycle

BCDCOG's CHATS 2040 LRTP (BCDCOG 2018) identifies a number of recommended pedestrian trails and bicycle lanes in the project study area along and intersecting with US 52 and US 78. There are a large number of existing sidewalks and some bicycle lanes/trails within the study area, with the largest concentration of dedicated bike lanes being in downtown Charleston. The pedestrian and bicycle recommendations of the LRTP are based primarily on the *Walk+Bike BCD* regional plan (BCDCOG 2017).

The 2017 *Walk+Bike BCD* (BCDCOG 2017) document envisions a network of infrastructure for active transportation connecting communities of all sizes across the tri-county region, so that walking and bicycling are a common part of everyday life for residents and visitors. The *Walk+Bike BCD* plan was informed by many previous and ongoing plans in the region, including the 2015 CCPRC People to Parks Plan, the ongoing East Coast Greenway plans, the 2015 BCD Blueways and Greenway Plan, the 2016 Dorchester County Parks & Recreation Master Plan, the 2017 People Pedal Plan (the City of Charleston's bicycle master plan), and other local and regional plans. *Walk+Bike BCD*'s recommendations for a comprehensive pedestrian

network are sensitive to reasonable distances that people will walk and how direct the paths of travel are from major origins to destinations. In the CHATS planning area for pedestrian use, the Plan recommends 396 miles of shared use paths, 87 miles of new sidewalks, and the improvement of 28 miles of existing sidewalks (BCDCOG 2018). A number of these proposed improvements are located within the study area.

Bikeway recommendations from *Walk+Bike BCD* are concentrated in the CHATS planning area, creating a comprehensive network of both on-street and off-street bikeways that aligns with where people want to travel, addresses equity needs, and connects to existing facilities and areas of active transportation demand. In the CHATS planning area, the Plan recommends 396 miles of shared-use paths, 21 miles of separated bike lanes, 19 miles of buffered bike lanes, 41 miles of bike lane, 187 miles of paved shoulder, and 47 miles of bicycle route and/or roads marked with sharrows to indicate shared vehicular-bike lanes (BCDCOG 2018). A number of these proposed improvements are located within the study area.

There is a concentration of recreational trails within Wannamaker County Park in North Charleston, located to the northwest of the intersection of US 52 and US 78. The park is accessed from US 78. Wannamaker County Park contains over 1,015 acres of woodlands and wetlands, as well as two miles of paved trails for walking, biking, and skating (Charleston County Parks 2019).

Within the study area in Summerville, a portion of the Sawmill Branch Trail is located adjacent to Sawmill Branch and SC 165 (Berlin G. Myers Parkway). The northern end of this approximately 6.1-mile long trail is located at Gahagan Road. The 10-foot wide trail is paved and can be used by pedestrians and cyclists (South Carolina Trails 2019).

2.3.4 Airports, Waterways, and Railways

While there are no airports (commercial or general aviation) in the immediate CCR study area, the Charleston International Airport is adjacent to the study area in the central portion of North Charleston. The southern portion of the study area is bounded on the west by the Ashley River. The Charleston Harbor is to the southeast of the southern extent of the study area.

There are several railroad alignments, including commercial and passenger, in the study area. The new North Charleston Intermodal Transportation Center is being constructed at the current Amtrak Station site on Gaynor Avenue in North Charleston. CSX Transportation has an at-grade crossing of US 52/US 78 (Rivers Avenue) to the north of I-526. The CSX tracks are generally oriented northwest-southeast along the eastern edge of the study area between the North Charleston intersection of US 52 and US 78 and two locations where US 52/US 78 (Rivers Avenue) crosses over the tracks. Southward of these two crossings, the railroad generally runs parallel to US 78 (King Street Extension) and then traverses eastward toward its terminus at the Charleston Shipping Terminal on the Charleston Harbor/Cooper River, which occurs after an elevated crossing by US 52 (Meeting Street) near Cunningham Avenue.

2.4 Economic Outlook and Employment

South Carolina as a whole has experienced a period of economic strength since the economic downturn in 2008, and the Charleston metropolitan statistical area (MSA) has been a leading

driver of this momentum, with growth generally exceeding the national economy. This momentum has affected development in the study area and will continue to provide economic opportunities.

Continuing a decade of improvements, South Carolina’s unemployment rate in November 2018 was 3.3 percent versus the national rate of 3.7 percent (Federal Reserve Bank of Richmond 2018). By 2012, the Charleston area exceeded pre-recession levels of employment. In 2018, total employment in Charleston grew 2.2 percent, as compared with a national rate of 1.7 percent. Additionally, Charleston continued to lead metropolitan areas in the state with an unemployment rate of 2.8 percent (South Carolina Department of Employment 2018). While the outlook for 2019 and beyond is moderated by tariff issues and rising interest rates, South Carolina and Charleston will likely continue to experience an expanding labor force and positive labor force absorption (Von Nessen 2018).

The service sector, driven by a strong tourism industry, has long contributed to Charleston’s economy and has been a driver in the area’s recent growth. According to statistics from the U.S. Department of Housing and Urban Development (HUD), the service sector payroll grew by 52 percent between 2000 and 2017 (HUD 2017). Tourism provided \$4.2 billion of economic impact, according to the Charleston Metro Chamber of Commerce. The government sector, led by Joint Base Charleston and the Charleston Naval Complex, is estimated to bring \$4 billion in direct investment and \$2.3 billion in indirect investment to the MSA while employing approximately 22,000 according to HUD.

While the service economy and nation’s third largest naval base continue to be important factors in economic development, major investments in the advanced industry sector have played an increasing role in Charleston’s development. In the past decade, Boeing, Mercedes-Benz, Volvo, and others have established major manufacturing presences in the region over recent years and existing firms such as Bosch have reinvested and expanded their local operations. An additional factor in the region’s growth has been investment in the Port of Charleston in order to accommodate Post Panamax ships. The port, along with Charleston’s airport and rail facilities, contributes to a robust logistics and supply chain infrastructure in the region. This, in turn, supports continued strength in the advanced industries. Many advanced industry employers are located north of Summerville, along US 78. Table 2 shows the region’s largest private employers and underlines the regional strength of advanced industry.

Table 2 Largest Private Sector Employers- Charleston, SC MSA

Company	Product or service	Employees
The Boeing Company	Aircraft manufacturing	7,000
Roper St. Francis Healthcare	Roper and Bon Secours St Francis Hospitals	5,700
Trident Health System	Hospital system	2,600
Walmart Inc.	Retail merchandise	2,300
Robert Bosch LLC	Antilock brake systems, fuel injectors, common rail & unit injectors	2,000
Blackbaud, Inc.	Specialty computer software development & design	1,400

Company	Product or service	Employees
Publix Supermarkets	Retail grocery stores	1,200
iQor	Inbound/outbound customer service call center	1,200
BenefitFocus	Custom benefits software	1,000
Harris Teeter Supermarkets	Retail grocery stores	1,000
KapStone Charleston Kraft LLC	Paper, packaging manufacturing	1,000
Kiawah Island Golf Resort	Resort	1,000
Nucor Steel	Manufacture carbon & alloy steel in various forms	1,000
Volvo Car USA LLC	Manufacture Volvo S60 sedans (for USA and export)	950
SAIC	Scientific, engineering & technology applications; national security, energy, critical infrastructure, health sectors	915
Mercedes-Benz Vans, LLC	Assembly of Sprinter vans for the U.S. market; Semi-knockdown (SKD) production of Metris van.	900

According to the University of South Carolina, the outlook for 2019 onward is generally positive. Overall, growth is anticipated to be moderate (due to tariffs, rising interest rates and changes in the global economy) but will remain steady, with job growth at or above 2 percent and an unemployment rate below 3.5 percent (Von Nessen 2018).

2.5 Socioeconomic Characteristics

State-, county-, and municipal-level demographic and economic factors are provided in this section in an effort to characterize the study area region and give context to the immediate study area factors presented in Section 3, Community Context, below.

2.5.1 Population Trends

Population data for Charleston, Berkeley, and Dorchester counties, the six municipalities in the CCR study area, and the state of South Carolina are provided in Table 3. The data are based on the 2010 Census, the 2017 PEP, and the South Carolina Department of Revenue and Fiscal Affairs (SCDRFA) 2030 population projections. From 2010 to 2017, population growth in all three counties was greater than the state over the same period, and this trend is predicted to continue. Similarly, growth within the six municipalities in the study area exceeded the average rate of growth of municipalities across the state.

Table 3 Regional Population Trends

Geography	2010 Census population	2017 PEP population	% Change (2010-2017)	2030 Projected population	% Change (2017-2030)
South Carolina	4,625,364	5,024,369	8.4	5,730,490	14.1
Berkeley County	177,843	217,937	21.8	286,250	31.4
City of Goose Creek	35,938	42,619	18.6	—	—
City of Hanahan	17,997	24,885	38.3	—	—
Charleston County	350,209	401,438	14.4	509,320	26.9

Geography	2010 Census population	2017 PEP population	% Change (2010-2017)	2030 Projected population	% Change (2017-2030)
City of Charleston	120,083	134,875	12.3	—	—
Town of Lincolville	1,139	2,475	117.3	—	—
City of North Charleston	97,471	110,861	13.7	—	—
Dorchester County	96,413	156,456	13.8	206,100	31.7
Town of Summerville	43,392	50,388	16.1	—	—

Sources: 2010 Census, 2017 PEP, SCDRFA 2016
 — indicates no data

While not shown on Table 3, population densities in the three study area counties were greater than South Carolina as a whole, according to the 2017 ACS. Of the three counties, Charleston County was the most densely settled, with approximately 261 more people per square mile than the state. Berkeley County was the least densely settled, with around 23 additional people per square mile than the average across South Carolina.

2.5.2 Housing and Other Demographic Factors

Table 4 shows other demographic factors at the regional level according to the 2017 ACS. Populations within the counties and municipalities in the study area were consistently more urban than the state as a whole. With the exception of the Town of Lincolville, where the median age was nearly 41, median ages in the study area region were lower than the median age across South Carolina. The cities of Goose Creek and North Charleston had the lowest median ages, both around 32. Racial and ethnic diversity in the study area region was generally similar to or less than the state as a whole. The major exceptions to this were in the Town of Lincolville and the City of North Charleston, where the USCB race category “White alone” was estimated among less than half of the total population.

Table 4 Other Regional Demographic Factors

Geography	% Urban population, 2010 census	Median age	% White alone	% High school or higher	% Different house one year ago
South Carolina	66.3	39.0	67.3	86.5	14.5
Berkeley County	71.1	35.8	67.1	88.3	16.0
City of Goose Creek	97.6	31.8	68.7	91.3	20.9
City of Hanahan	99.8	35.1	73.8	90.4	13.7
Charleston County	89.1	37.2	67.8	91.0	16.1
City of Charleston	96.2	34.4	74.4	94.3	18.7
Town of Lincolville	100.0	40.9	48.6	85.2	8.7
City of North Charleston	99.9	32.5	45.3	83.5	20.6
Dorchester County	80.5	36.2	67.9	90.0	15.4
Town of Summerville	99.9	35.4	73.6	92.6	19.4

Sources: 2010 Census, 2017 ACS

Table 5 presents housing characteristics for the three counties and six municipalities in the study area and the state as a whole, according to the 2017 ACS. Across the tri-county region, over 320 thousand housing units existed. The total number of housing units in the three study area counties accounted for 14.4 percent of all housing units in the state. Except in the Town of Lincolnville, a lower percentage of housing units were vacant in the study area region than across South Carolina. Generally, a lower percentage of housing units in the study area region were owner occupied than in the state as a whole. Median home values and median rents in the study area region were higher than the state, for the most part.

Table 5 Regional Housing Characteristics

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
South Carolina	2,229,324	16.1	68.6	\$148,600	\$836
Berkeley County	80,049	8.6	70.0	\$164,900	\$1,014
City of Goose Creek	14,468	4.9	68.0	\$174,500	\$1,179
City of Hanahan	8,569	5.4	60.6	\$205,700	\$977
Charleston County	181,326	15.0	60.6	\$273,100	\$1,084
City of Charleston	61,199	12.0	54.4	\$286,200	\$1,135
Town of Lincolnville	548	18.2	62.1	\$117,400	\$864
City of North Charleston	45,893	11.6	44.5	\$155,900	\$952
Dorchester County	59,038	8.5	71.1	\$177,500	\$1,003
Town of Summerville	19,129	8.2	64.1	\$189,400	\$1,036

Source: 2017 ACS

2.5.3 Economic Factors

Table 6 provides 2017 ACS estimates on several economic factors. The labor force in the tri-county region amounted to 16.4 percent of the total labor force population for the entire state. Unemployment rates were generally lower in the study area region than the state as a whole. The exception to this trend was in the Town of Lincolnville, where the unemployment rate was over two times higher than in the other municipalities, the counties, or the state. In Lincolnville and the City of North Charleston, median household incomes were lower than the median household income of South Carolina, whereas elsewhere in the study area region, the medians were higher than the state. Likewise, poverty rates for people in families in these two municipalities were higher than the state, while the other municipalities and counties had lower rates.

Table 6 Regional Economic Factors

Geography	Labor force population	Unemployment rate	Median household income	Poverty rate, people in families
South Carolina	2,381,900	7.2	\$48,781	14.0
Berkeley County	103,990	6.4	\$56,697	10.8

Geography	Labor force population	Unemployment rate	Median household income	Poverty rate, people in families
City of Goose Creek	22,709	6.6	\$64,204	9.3
City of Hanahan	11,937	4.3	\$61,221	8.1
Charleston County	209,293	5.3	\$57,882	12.1
City of Charleston	74,940	4.8	\$61,367	8.2
Town of Lincolville	517	14.9	\$37,143	17.8
City of North Charleston	56,273	7.1	\$39,944	21.8
Dorchester County	76,159	6.2	\$58,685	9.6
Town of Summerville	24,621	6.8	\$57,825	7.9

Source: 2017 ACS

2.6 Environmental Justice and Limited English Proficiency

State-, county-, and municipal-level demographic and economic factors are provided in this section in an effort to characterize EJ and LEP factors in the study area region and give context to the immediate study area factors presented in Section 3, Community Context, below.

2.6.1 Minority Populations

Table 7 presents the 2017 ACS minority population percentages for the study area region and the state, as well as the portions of the overall population that identified as races and ethnicities other than the USCB one-race category “White alone.” Generally, minority populations in the study area region were proportionally similar to or less than the state as a whole. As with several other socioeconomic factors, the Town of Lincolville and the City of North Charleston did not fit this regional trend. These municipalities had larger minority populations proportionally than South Carolina as a whole, and their percentages exceeded the 50-percent threshold noted as significant in EJ guidance. The prominent minority race or ethnicity across the study area region and the state was Black or African American. Across the region and state, Hispanic populations ranked as the second most numerous minority population.

Table 7 Regional Minority Populations

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
South Carolina	32.7	27.2	0.3	1.5	0.1	1.5	2.1	5.5
Berkeley County	32.9	24.1	0.4	2.3	0.1	2.7	3.2	6.3
City of Goose Creek	31.3	20.7	0.3	3.3	0.0	2.6	4.4	8.2
City of Hanahan	26.2	14.7	0.1	5.4	0.0	2.5	3.5	8.4
Charleston County	32.2	27.8	0.1	1.3	0.0	0.8	2.1	5.0
City of Charleston	25.6	21.9	0.1	1.6	0.0	0.3	1.6	2.9
Town of Lincolville	51.4	49.3	0.0	0.0	0.1	0.0	2.0	2.7
City of North Charleston	54.7	47.2	0.2	2.1	0.1	1.9	3.3	10.4

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
Dorchester County	32.1	25.7	0.5	1.9	0.0	1.3	2.7	5.0
Town of Summerville	26.4	19.4	0.4	1.7	0.0	2.3	2.5	5.9

Source: 2017 ACS

Abbreviations: Af. Am. = Black or African American; Am. Indian / AK Native = American Indian and Alaska Native

2.6.2 Low-Income Populations

Table 8 provides per capita income and poverty rates for the study area region and South Carolina, according to the 2017 ACS. As shown, per capita income rates were higher than the state in all noted places in the region except the Town of Lincolnville and the City of North Charleston. Individual poverty rates reflected the same pattern, where all municipalities and counties in the study area had lower rates than the state except Lincolnville and North Charleston. However, overall, Lincolnville, North Charleston, the City of Charleston, and Berkeley and Charleston counties all had poverty rates higher than the official U.S. poverty rate of 12.3 percent.

Table 8 Regional Low-Income Populations

Geography	Per capita income	Poverty rate, all people
South Carolina	\$26,645	16.6
Berkeley County	\$27,010	12.8
City of Goose Creek	\$27,461	10.2
City of Hanahan	\$29,643	10.6
Charleston County	\$35,587	15.3
City of Charleston	\$38,126	14.6
Town of Lincolnville	\$16,272	22.3
City of North Charleston	\$22,099	22.8
Dorchester County	\$27,317	11.8
Town of Summerville	\$28,250	10.4

Source: 2017 ACS

2.6.3 Limited English Proficiency Populations

Eligible LEP language group population counts and their associated portion of the total population aged 5 years and up, as detailed in the 2017 ACS, are shown in Table 9. Spanish-speaking LEP populations in all counties in the study area region and the Asian or Pacific Islander language-speaking LEP population in Charleston County exceeded the DOJ LEP threshold. The City of North Charleston was the only municipality in the study area region that had a LEP population that exceeded the LEP threshold. North Charleston was home to a Spanish-speaking LEP population exceeding 4,000 people.

Table 9 Regional Limited English Proficiency Populations

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
South Carolina	90,311	2.0	15,035	0.3	19,155	0.4	3,310	0.1
Berkeley County	3,905	2.0	884	0.5	947	0.5	55	0.0
City of Goose Creek	817	2.1	84	0.2	183	0.5	32	0.1
City of Hanahan	772	3.8	274	1.3	97	0.5	23	0.1
Charleston County	6,253	1.7	891	0.2	1,154	0.3	166	0.0
City of Charleston	662	0.5	358	0.3	482	0.4	106	0.1
Town of Lincolnton	40	3.3	0.0	0.0	0.0	0.0	0.0	0.0
City of North Charleston	4,274	4.3	271	0.3	573	0.6	118	0.1
Dorchester County	1,906	1.3	426	0.3	744	0.5	72	0.1
Town of Summerville	574	1.3	124	0.3	268	0.6	0.0	0.0

Source: 2017 ACS

3 Community Context

This section presents details pertaining to the CCR study area. These include historical to recent development trends; residential subdivisions, community facilities, and activity areas; and demographics and economics in the study area. EJ and language use characteristics are also presented in this section. The discussion is organized by segments of the study area, which are considered north to south.

3.1 Study Area Socioeconomic Factors

The 38-square mile CCR study area overlaps 101 USCB block groups contained within 50 USCB census tracts (see Table 1). No American Indian lands fall within the CCR study area. However, the Wassamasaw state tribal statistical area is located in Berkeley County, northeast of and nearly adjacent to the northern extent of the study area (USCB 2019b).

According to the 2017 ACS, approximately 85,324 people resided in the study area in 2017. The study area experienced an 8.7 percent increase in population between 2010 and 2017, a similar rate as South Carolina in the same period. The median age across the study area was 32.2 years old, younger than the median ages for the state and the three counties in the study area region. A lower percentage of people across the study area (51.7 percent) identified as “White alone” than in the state or in Berkeley, Charleston, or Dorchester counties. Minorities constituted 48.3 percent of people in the study area, with African American and Hispanic ranking as the two most numerous minority groups. Across the study area, the highest educational attainment of most people 25 years old and older was a high school diploma or equivalency, and people holding bachelor’s degrees are the most numerous among those who completed college degrees.

Approximately 13.6 percent of the over 35 thousand housing units in the study area were vacant, according to the 2017 ACS. The median home value in the study area (\$172,250) was higher than the medians of the state and Berkeley County. Median gross rent (\$982) was higher than the state median but lower than the medians of the three study area counties. Median household income (\$43,125) and the average per capita income rate in the study area (\$25,824) were both lower than the state and county medians. Approximately 7.0 percent of the civilian workforce was unemployed, slightly lower than the state unemployment rate and higher than the county rates in the same period. Poverty rates for individuals averaged 23.7 percent across the study area, higher than the rates of the state and the counties and municipalities of the study area region. As reported in the 2017 ACS, the Spanish-speaking LEP population, which constituted 2,383 individuals, or 3.0 percent of the study area population aged 5 years old or older, was the only LEP population to meet the DOJ LEP threshold across the study area.

3.2 Segment 1 – Berlin G Myers

Segment 1 is approximately 9.2 square miles and physically constitutes 24.1 percent of the study area. The segment is largely composed of portions of Berkeley and Dorchester counties but also includes a small area within Charleston County. Incorporated limits of the Town of Summerville, including several subdivisions and neighborhoods, as well as unincorporated portions of Berkeley and Dorchester counties whose residents utilize services in Summerville comprise the majority of Segment 1, as shown on Figure 5 and listed in Appendix 1.

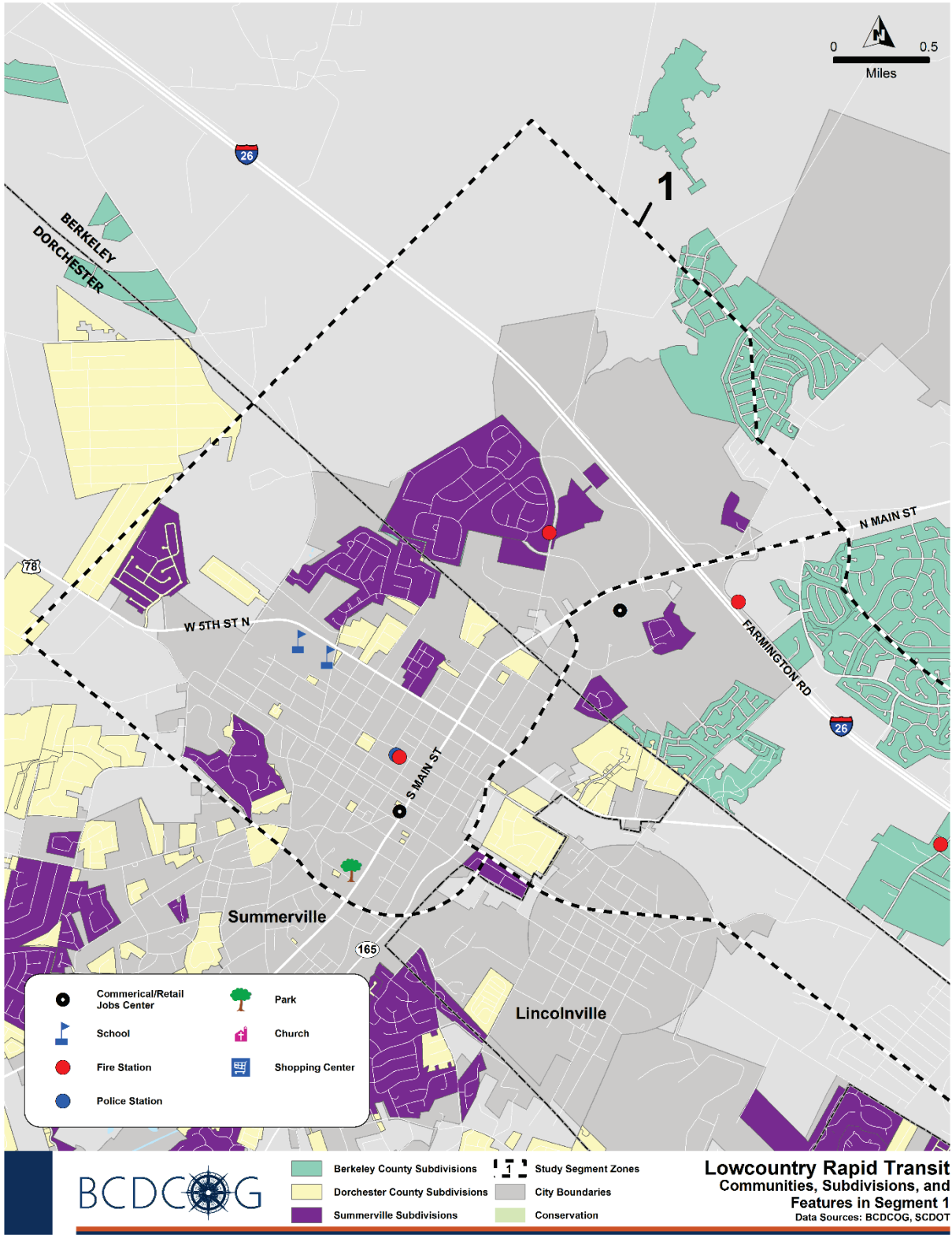


Figure 5 Communities, Subdivisions, and Features in Segment 1

3.2.1 Summerville

The Town of Summerville is located in southeastern Dorchester County and extends into small portions of Berkeley and Charleston counties. Summerville is bordered to the east by the Town of Lincolville and to the southeast by the City of North Charleston. Land uses within the 18.1-square mile town are primarily residential with interspersed commercial and institutional (Dorchester County 2018; USCB 2019a). The town's population was around 3,000 until the late 1970s, when it doubled to 6,000 people. The population doubled again by the 1980s and currently exceeds 46,000. US 78 provides access to the center of Summerville and connects the town with downtown Charleston and St. George. I-26 also provides the town access to Charleston as well as Columbia, 90 miles to the northwest.

Summerville was first inhabited in the late 1700s as Charlestonians and other inhabitants of the area sought relief from the summer heat, mosquitos, and disease (Town of Summerville 2019). From May to September, plantation families along the nearby Ashley River and other coastal areas headed for higher elevation to live temporarily in the tiny colony in the pines. Modernization came to the village with the arrival of the railroad in the early 1800s, and in 1847, the village incorporated as a town. Summerville suffered extensive destruction in the 1886 earthquake, followed by a downtown fire which destroyed most of the buildings surrounding the town's central square. The International Congress of Physicians declared Summerville as one of the best places for those suffering from lung disorders, and the town built several inns and hotels to serve visitors. Eventually, many people built winter homes in Summerville, and some made the town their permanent home.

Summerville currently attracts families, business people, and military personnel who move to the area for employment and recreational opportunities (Town of Summerville 2019). Presently, multiple residential, industrial, and/or mixed-use developments are being constructed or planned in the area. To accommodate this growth, Summerville prepared a 2014 Vision Plan that provides for various transportation modes and choices and other investments to provide access to the many amenities in the area while maintaining the small town atmosphere important to its residents (also see Section 2, Regional Context, above).

3.2.2 Major Community Features

In Segment 1, major community features concentrate in and around Summerville. These include schools, churches, parks, emergency facilities, and retail shops, as provided in Table 10. Known subdivisions and neighborhoods in Segment 1 are listed in Appendix 1 and shown on Figure 5, as delineated by BCDCOG or the associated municipality or county.

Table 10 Segment 1 Major Community Features

Community feature	Location		
Churches			
Bethany United Methodist Church	118 W 3rd South St	Summerville	SC
Bethel AME Church	407 S Main St	Summerville	SC
Bethesda Mission	118 Legion Rd	Summerville	SC

Community feature	Location		
Christ Temple of Summerville	419 E 5th North St	Summerville	SC
Church Of God Brownsville	920 W 1st North St	Summerville	SC
Church of God of Prophecy	407 N Magnolia St	Summerville	SC
Daystar Ministries	105 W 3rd South St	Summerville	SC
Deliverance Tabernacle	3190 W 5th North St	Summerville	SC
Epiphany Episcopal Church	212 Central Avenue	Summerville	SC
First Missionary Baptist Church	124 Pressley Ave	Summerville	SC
Friendship True Bibleway	101 Linning Rd	Summerville	SC
House-God Church-Summerville	306 N Palmetto St	Summerville	SC
Leisure Ministries Gymnasium	118 W 3rd South St	Summerville	SC
One Voice Church	437 N Main St	Summerville	SC
Refuge Church of Our Lord	215 W 4th North St	Summerville	SC
River Church	134 Hemphill Ct	Summerville	SC
Saints Cyril & Methodius	123 W Richardson Ave	Summerville	SC
Seacoast Church Summerville	312 N Laurel St	Summerville	SC
St James Missionary Baptist	PO Box 3200	Summerville	SC
St John's Beloved Catholic	28 Sumter Ave	Summerville	SC
St Luke Baptist Church	400 N Palmetto St	Summerville	SC
St Luke's Lutheran Church	206 Central Ave	Summerville	SC
Summerville Baptist Church	417 Central Ave	Summerville	SC
Summerville Church of God	304 S Pine St	Summerville	SC
Summerville Presbyterian	407 S Laurel St	Summerville	SC
Summerville Seventh Day	108 N Pine St	Summerville	SC
Tabernacle of Praise	218 N Hickory St	Summerville	SC
Victory In Praise Tabernacle	202 Bryan St	Summerville	SC
Wesley United Methodist Church	125 Pressley Ave	Summerville	SC
Schools			
Alston Middle School	500 Bryan Street	Summerville	SC
Alston-Bailey Elementary School	820 W. 5 th Street	Summerville	SC
Parks			
Azalea Park	105 W. 5 th street	Summerville	SC
Emergency facilities			
Summerville Fire Department Hqtrs.	300 W. 2 nd North Street	Summerville	SC
Summerville Fire Station No. 4	164 Sheep Island Road	Summerville	SC
Summerville Police Department	300 W. 2 nd North Street	Summerville	SC

Community feature		Location	
Major activity nodes			
Commercial/Retail	Downtown Summerville	Summerville	SC

Downtown Summerville is a thriving commercial center with several restaurants, coffee shops, and retail stores. A historic district featuring historical homes and churches surrounds the central commercial district. Central Summerville conveys a distinct small town atmosphere and a unique sense of place (Figure 6). In part, this is because of the numerous churches in the Summerville area, ranging from historical churches such as First Missionary Baptist Church founded in 1889 and Epiphany Episcopal Church founded in 1887 to newer churches such as Seacoast Church, part of a more contemporary movement with multiple campuses throughout the state.



Figure 6 Central Portion of Summerville

Alston Middle School and Alston-Bailey Elementary School are part of Dorchester School District Two and have served Summerville residents for many years. The Alston campus was originally the African-American high school in Summerville, but when schools integrated and all students attended Summerville High School, outside of the CCR study area, the campus began serving middle school students of any race (HDR stakeholder discussion, January 30, 2019).

Due to the continuing population growth in the area surrounding Summerville, numerous other schools outside the CCR study area have been constructed to accommodate this growth.

Since the 1980s, several areas surrounding Summerville have been developed into residential subdivisions that are distinctly suburban (HDR stakeholder discussion, January 30, 2019). The Oakbrook area, which surrounds the intersection of Dorchester Road and Bacons Ridge Road to the west of Segment 1, was the first area to develop near central Summerville. Oakbrook originally developed to provide housing and shopping for people associated with Joint Base Charleston, southward along Dorchester Road, and this remains a major activity area in Segment 1. Miller Country Club was another early development near Summerville, also west of Segment 1.

In more recent years, growth around Summerville has accelerated, particularly as people have moved to the area for employment and sought more affordable costs of living, and many people in new housing developments utilize Summerville's facilities (HDR stakeholder discussion, January 30, 2019). The larger of these subdivisions include The Ponds and Summer's Corner to the west of Segment 1 and Nexton, Carnes Crossing, and Cane Bay Plantation to the east and northeast of the segment. Nexton is a large housing development on the north side of I-26 that features homes as well as shared community resources, schools, and businesses. These new developments are currently posing traffic challenges in Segment 1, particularly along roadways that intersect I-26 near central Summerville.

3.2.3 Socioeconomic Characteristics

In an effort to further characterize Segment 1, USCB block group- or census tract-level demographic and economic factors are provided in this section. Data for the entirety of Segment 1 are presented to give context to the individual USCB geographies that make up the segment. Segment 1 data are compared with the study area characteristics given above. Twelve whole or partial USCB block groups within eight census tracts are encompassed by Segment 1, as shown in Figure 7 and presented in Table 1.

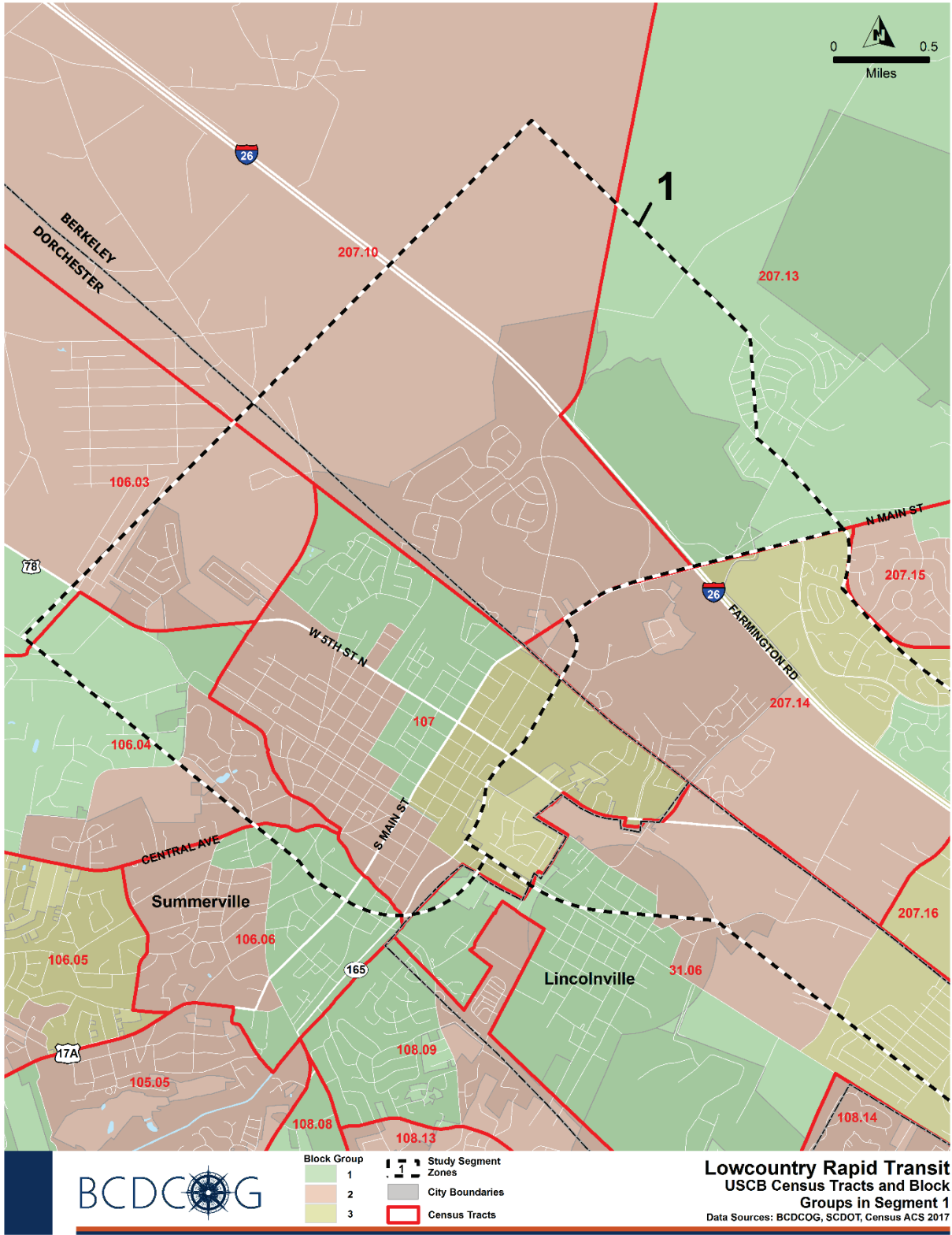


Figure 7 USCB Census Tracts and Block Groups in Segment 1

Population Trends

Population data for Segment 1 and the 12 Segment 1 block groups are provided in Table 11 based on the 2010 Census and the 2017 ACS. Between 2010 and 2017, the human population increased in all but two Segment 1 block groups, and most portions of Segment 1 increased at rates higher than the study area (8.7 percent) or the segment in their entirety. While not shown on Table 11, population density in Segment 1 was lower than the study area as a whole. The population of Segment 1 composed 9.2 percent of the overall study area population.

Table 11 Segment 1 Population Trends

Geography	2010 Census population	2017 ACS population	% Change (2010-2017)
Segment 1	7,340	7,843	6.9
CT 31.06 BG 1	31	51	65.1
CT 106.03 BG 1	27	31	15.6
CT 106.03 BG 2	576	711	23.5
CT 106.04 BG 1	504	586	16.2
CT 106.04 BG 2	407	516	26.7
CT 106.06 BG 1	166	195	17.2
CT 107 BG 1	1,940	1,734	-10.6
CT 107 BG 2	1,604	1,480	-7.8
CT 107 BG 3	779	926	19.0
CT 207.10 BG 2	989	1,247	26.1
CT 207.13 BG 1	271	314	15.9
CT 207.14 BG 2	46	52	14.0

Sources: 2010 Census, 2017 ACS

Housing and Other Demographic Factors

Table 12 shows other demographic factors in Segment 1, according to the 2017 ACS. Populations in all but two Segment 1 block groups were more urban than the segment as a whole. The median ages for Segment 1 and eight of the 12 Segment 1 block groups were higher than the median age across the study area (32.2). Racial and ethnic diversity in a majority of the Segment 1 block groups was less than the study area as a whole, where 51.7 percent of people identified as “White alone.” Similar to the study area, the highest educational attainment of most people 25 years old and older was a high school diploma or equivalency, and of the people who completed an associate’s degree or higher, more obtained a bachelor’s degree than other degrees.

Table 12 Other Segment 1 Demographic Factors

Geography	% Urban population, 2010 census	Median age	% White alone	% Highest educ. attainment., high school or GED	% Highest educ. attainment., bachelor's degree
Segment 1	95.8	36.2 ¹	57.8	19.0	11.5
CT 31.06 BG 1	100.0	35.9	51.6	26.1	21.9
CT 106.03 BG 1	99.9	38.5	84.7	33.6	14.6
CT 106.03 BG 2	99.8	27.0	69.1	27.9	18.7
CT 106.04 BG 1	100.0	36.5	71.3	31.7	16.0
CT 106.04 BG 2	100.0	30.6	64.4	22.6	32.7
CT 106.06 BG 1	100.0	50.4	90.3	11.2	33.7
CT 107 BG 1	100.0	43.3	34.0	30.1	13.9
CT 107 BG 2	100.0	35.3	46.3	31.1	14.8
CT 107 BG 3	100.0	32.0	67.5	38.8	17.0
CT 207.10 BG 2	72.0	29.3	71.9	22.4	20.5
CT 207.13 BG 1	88.1	41.0	71.1	34.3	13.8
CT 207.14 BG 2	100.0	40.7	84.2	31.4	31.2

Sources: 2010 Census, 2017 ACS

¹ A median factored from a set of medians

Table 13 presents housing characteristics for Segment 1 and its associated block groups, according to the 2017 ACS. The total number of housing units in Segment 1 accounted for 8.5 percent of all housing units in the study area (35,592). Overall across Segment 1 and in every associated block group except one, a lower percentage of housing units were vacant than the study area as a whole (13.6 percent). Median home values and median rents in Segment 1 were generally higher than the study area medians of \$172,250 and \$982, respectively.

Table 13 Segment 1 Housing Characteristics

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
Segment 1	3,034	6.7	63.1	\$192,250 ¹	\$1,121 ¹
CT 31.06 BG 1	22	5.2	78.1	\$173,400	\$1,167
CT 106.03 BG 1	12	13.3	89.1	\$207,600	\$1,913
CT 106.03 BG 2	236	7.4	77.0	\$138,100	\$1,137
CT 106.04 BG 1	220	5.5	73.0	\$222,700	\$786
CT 106.04 BG 2	194	8.8	74.7	\$374,600	\$805
CT 106.06 BG 1	81	6.9	78.3	\$338,800	\$1,103
CT 107 BG 1	692	5.2	56.6	\$95,000	\$1,159
CT 107 BG 2	555	13.7	64.6	\$275,000	\$779
CT 107 BG 3	467	6.7	49.0	\$200,300	\$775

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
CT 207.10 BG 2	410	0.0	61.8	\$184,200	\$1,240
CT 207.13 BG 1	121	3.4	74.1	\$170,200	\$1,108
CT 207.14 BG 2	24	8.6	71.1	\$179,700	\$1,133

Source: 2017 ACS

¹ A median factored from a set of medians

Economic Factors

Table 14 provides 2017 ACS estimates for several economic factors in the eight census tracts overlapped by Segment 1. The civilian labor force in Segment 1 amounted to 8.4 percent of the total civilian workforce population of the study area (41,779). The unemployment rate for Segment 1 was slightly lower than the study area as a whole (7.0 percent), whereas four of the eight census tracts overlapped by Segment 1 have higher unemployment rates than the study area.

Median household incomes and poverty rates for people in families across Segment 1 and in all but one associated census tract were higher than the study area as a whole (\$43,125 and 19.7 percent, respectively).

Table 14 Segment 1 Economic Factors

Geography	Civilian labor force population	Unemployment rate	Median household income	Poverty rate, people in families
Segment 1 ¹	3,507	6.8 ²	\$58,044 ³	9.7 ²
CT 31.06	23	11.5	\$53,500	17.4
CT 106.03	434	9.6	\$53,737	13.0
CT 106.04	434	8.3	\$54,906	14.8
CT 106.06	86	3.6	\$75,000	0.8
CT 107	1,926	6.5	\$36,456	20.4
CT 207.10	381	3.8	\$64,587	1.4
CT 207.13	170	7.3	\$61,182	4.3
CT 207.14	53	5.7	\$65,720	5.1

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² An average of rates reported for census tracts

³ A median factored from a set of medians

3.2.4 Environmental Justice and Language Use

USCB block group- or census tract-level data are provided in this section to characterize EJ and LEP factors in Segment 1. Data for the entirety of Segment 1 are presented to give context to the individual USCB geographies that make up the segment. Segment 1 data are compared with the study area characteristics given above.

Minority Populations

Table 15 presents the 2017 ACS minority population percentages for Segment 1 and the 12 associated block groups, as well as the portions of the overall population that identified as races and ethnicities other than the USCB one-race category “White alone.” As a whole, Segment 1 had a minority population percentage that was lower than the study area, where 48.3 percent of the population identified as a minority. However, three block groups in Segment 1 had larger minority populations proportionally than the study area, and the percentages in two of these block groups (CT 107 BG 1 and CT 107 BG 2) exceeded the 50-percent threshold noted as significant in EJ guidance. Like the study area, the prominent minority race or ethnicity across Segment 1 was Black or African American, and Hispanic populations ranked as the second most numerous.

Table 15 Segment 1 Minority Populations

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
Segment 1	42.2	35.2	1.0	0.7	0.0	2.4	3.0	4.1
CT 31.06 BG 1	48.4	35.3	0.0	3.7	0.0	2.9	6.5	4.7
CT 106.03 BG 1	15.3	11.9	0.1	1.8	0.0	0.0	1.5	16.1
CT 106.03 BG 2	30.9	22.0	0.0	0.0	0.0	6.3	2.6	9.1
CT 106.04 BG 1	28.7	21.9	0.0	1.9	0.0	2.1	2.8	2.1
CT 106.04 BG 2	35.6	18.5	3.1	1.8	0.0	6.1	6.2	13.2
CT 106.06 BG 1	9.7	9.3	0.0	0.0	0.0	0.0	0.4	1.7
CT 107 BG 1	66.0	59.6	1.8	0.0	0.0	0.0	4.6	0.0
CT 107 BG 2	53.7	52.3	0.0	0.0	0.0	1.4	0.0	1.4
CT 107 BG 3	32.5	23.5	2.5	0.0	0.0	2.6	3.9	5.6
CT 207.10 BG 2	28.1	21.4	0.0	2.1	0.0	2.3	2.4	5.2
CT 207.13 BG 1	28.9	15.0	1.5	1.9	0.0	5.5	5.1	7.7
CT 207.14 BG 2	15.8	4.9	0.0	3.0	0.0	6.7	1.2	8.9

Source: 2017 ACS

Af. Am. = Black or African American; Am. Indian / AK Native = American Indian and Alaska Native

Note: EJ populations are emboldened

Low-Income Populations

Table 16 provides per capita income and poverty rates for Segment 1 and the eight census tracts overlapped by Segment 1, based on the 2017 ACS. As shown, per capita income rates were higher in Segment 1 and in five of the eight associated census tracts than in the study area, where \$25,824 was the average per capita income. Exceptions to this trend were noted in three Segment 1 census tracts, where per capita income rates were lower than in the study area; however, none of the Segment 1 census tracts had per capita income rates at or lower than the 2017 poverty threshold (\$12,752).

In four Segment 1 census tracts (CT 31.06, CT 106.03, CT 106.04, and CT 107), poverty rates figured for all people were higher than the official U.S. poverty rate (12.3 percent). However, poverty rates across Segment 1 and in each associated census tract were lower than the study area average of 23.7 percent.

Table 16 Segment 1 Low-Income Populations

Geography	Per capita income	Poverty rate, all people
Segment 1 ¹	\$28,518 ²	11.7 ²
CT 31.06	\$24,722	18.4
CT 106.03	\$24,809	14.9
CT 106.04	\$26,159	15.2
CT 106.06	\$37,694	3.6
CT 107	\$29,119	22.3
CT 207.10	\$23,714	4.5
CT 207.13	\$30,550	6.4
CT 207.14	\$31,376	8.1

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² An average of data reported for block groups

Note: EJ populations are emboldened

Limited English Proficiency Populations

LEP populations and their associated portions of the total population 5 years old and older are shown in Table 17, as reported in the 2017 ACS. While no Segment 1 LEP population meets the DOJ LEP threshold, Spanish-speaking LEP populations make up the majority of the overall Segment 1 LEP population.

Table 17 Segment 1 Limited English Proficiency Populations

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Segment 1	109	1.5	3	0.0	6	0.1	0	0.0
CT 31.06 BG 1	1	0.1	0	0.0	0	0.0	0	0.0
CT 106.03 BG 1	3	0.5	0	0.0	0	0.0	0	0.0
CT 106.03 BG 2	13	0.1	0	0.0	0	0.0	0	0.0
CT 106.04 BG 1	0	0.0	2	0.0	0	0.0	0	0.0
CT 106.04 BG 2	31	0.1	0	0.0	0	0.0	0	0.0
CT 106.06 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 107 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 107 BG 2	0	0.0	0	0.0	0	0.0	0	0.0

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
CT 107 BG 3	37	0.1	0	0.0	0	0.0	0	0.0
CT 207.10 BG 2	22	0.1	0	0.0	5	0.0	0	0.0
CT 207.13 BG 1	1	0.0	0	0.0	1	0.0	0	0.0
CT 207.14 BG 2	1	0.0	0	0.0	0	0.0	0	0.0

Source: 2017 ACS

3.3 Segment 2 – Berlin G Myers to Otranto

Segment 2 is approximately 8.5 square miles and physically constitutes 22.2 percent of the study area. The segment is composed of Berkeley and Charleston counties and a small portion of Dorchester County. Much of Segment 2 is unincorporated portions of Berkeley and Charleston counties known as Ladson, but portions of the Town of Lincolville and the cities of Goose Creek, Hanahan, and North Charleston, including several subdivisions and neighborhoods, are within Segment 2, as shown on Figure 8 and listed in Appendix 1. Lincolville and Goose Creek are discussed in this section. However, larger portions of the cities of North Charleston and Hanahan are within Segment 3, and as such, these cities are discussed in the Segment 3 section, below.

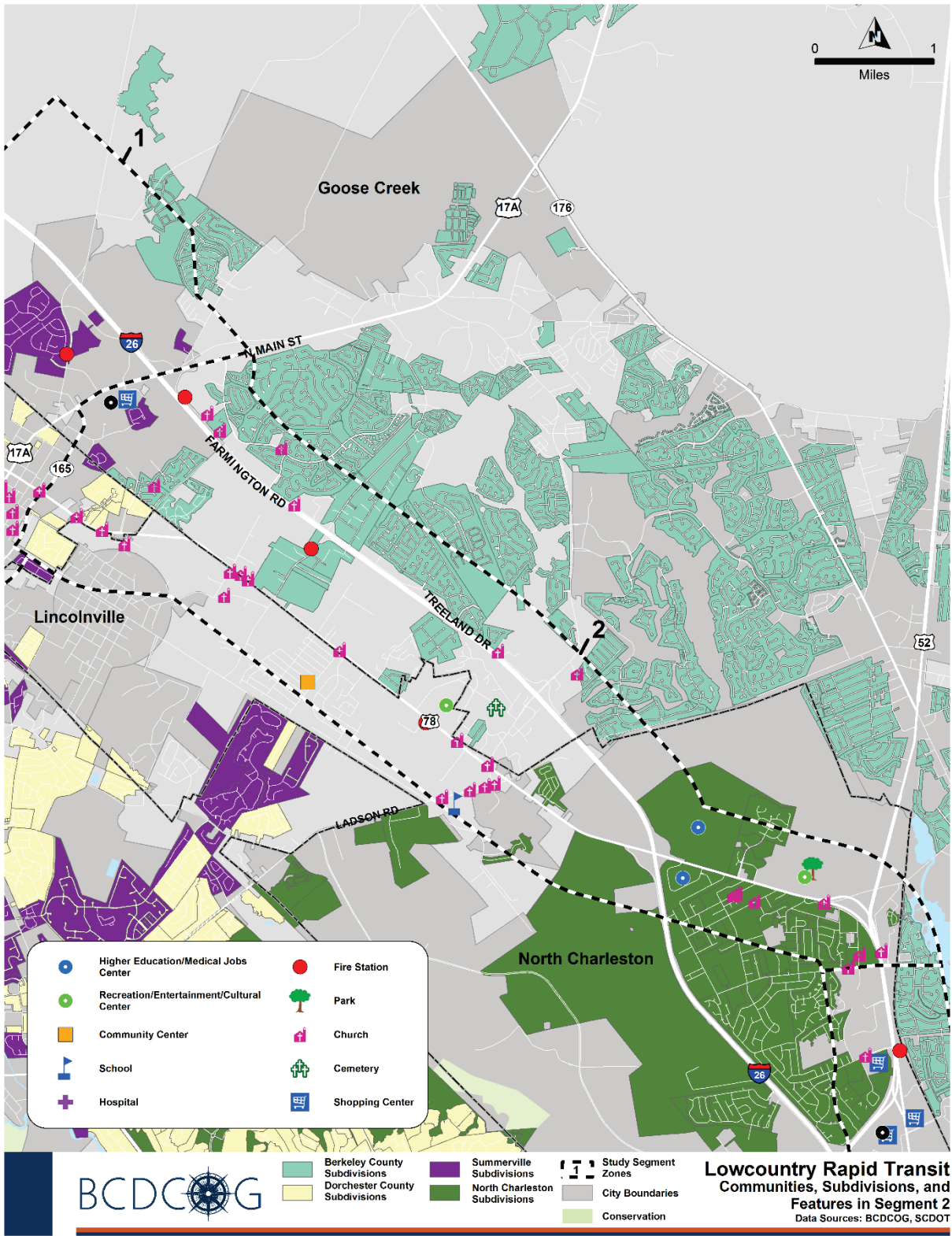


Figure 8 Communities, Subdivisions, and Features in Segment 2

3.3.1 Lincolville

Approximately one-third of the 1.2-square mile Town of Lincolville is encompassed within the CCR study area. Lincolville is primarily located in Charleston County, with a small portion of the town extending into Dorchester County. The Town of Summerville borders Lincolville to the north, west, and south, and unincorporated portions of Charleston County border the town to the east. Land uses in Lincolville are primarily residential, with some commercial and institutional land uses interspersed (Charleston County 2018). The town population was 1,150 people in 2010 and reached nearly 2,500 people by 2017 (USCB 2019a). Lincoln Avenue is the main roadway through the town, leading northwest toward Summerville and southeast to Ladson. Lincolville has experienced sustained, albeit relatively slow population growth, likely as a result of its proximity to Summerville.

Lincolville was founded in 1867 by seven African-American men who left Charleston to escape racial discrimination (South Carolina Department of Parks, Recreation, and Tourism 2019). Riding the local South Carolina Special train to examine properties offered for sale by the South Carolina Railroad Company, the men settled on this area, then known as "Pump Pond" due to its function as a train supply stop for water, wood, and coal. A charter for establishment of the town was applied for and received in December 1889. The name "Lincolville" was given to the settlement in honor of Abraham Lincoln. Many of Lincolville's initial settlers were members of Ebenezer AME Church.

3.3.2 Goose Creek

A small portion of the City of Goose Creek is within Segment 2. Goose Creek is located in southern Berkeley County. Goose Creek is bordered to the east by the Cooper and Back rivers, to the southeast by the City of Charleston, to the southwest by the city of Hanahan, and to the west by the unincorporated community of Ladson. Land uses in 40.8-square mile Goose Creek are primarily residential, with commercial, institutional, and open forested areas interspersed (Berkeley County 2018). The population of Goose Creek was approximately 36,000 in 2010 and had increased to approximately 43,000 by 2017. US 52 and US 176 traverse the center of Goose Creek and provide direct access to Charleston and Columbia.

Many of the initial settlers of Goose Creek were English planters who had originally settled in Barbados (Rison 2016). Many of the inhabitants were Anglican; however, many Huguenots settled there after 1700. In 1706, the Anglican parish of St. James Goose Creek was established, and the church building that is still extant was completed in 1719. The early settlers became known as the "Goose Creek men," and these early colonists often challenged the authority of Carolina's Lords Proprietors. Rice was a major product of Goose Creek by the early eighteenth century. In 1790, nearly 84 percent of the population of Goose Creek was enslaved on area rice plantations.

In the twentieth century, much of the land in Goose Creek was purchased by people outside the region to serve as recreational properties, and most of the African-American population relocated (Rison 2016). A portion of present-day Goose Creek became the U.S. Ammunitions Depot in 1941, and this facility became the Naval Weapons Annex in 1959. Industrial development began occurring near Goose Creek, and more people were attracted to the area.

Goose Creek was incorporated in 1961, and the Naval Weapons Annex was brought into the city in 1978. Today, Goose Creek is an important bedroom community to neighboring Charleston.

3.3.3 Major Community Features

In Segment 2, major community features concentrate in the central portion of the segment, surrounding US 78 and I-26. The features include schools, churches, and community, emergency, and healthcare facilities, as presented on Table 18. Known subdivisions and neighborhoods in Segment 2 are listed in Appendix 1 and shown on Figure 8, as delineated by BCDCOG or the associated municipality or county.

Table 18 Segment 2 Major Community Features

Community feature	Location		
Churches			
Blessed Hope Baptist Church	1447 Gleason Dr	Ladson	SC
Church of Jesus Christ of Latter Day Saints	8720 Antler Dr	North Charleston	SC
Covenant Life Church	10755 Highway 78 E	Summerville	SC
Deer Park Baptist Church	8875 University Blvd	North Charleston	SC
Faith Assembly of God	337 Farmington Rd	Summerville	SC
First Church of God	10383 Highway 78 E	Summerville	SC
Grace Family Worship Center	9802 Highway 78	Ladson	SC
Impact Church	3208 Mill St	Summerville	SC
Korean United Methodist Church	2745 Shadow Ln	North Charleston	SC
Ladson Baptist Church	3231 Ladson Rd	Ladson	SC
Low Country Freewill Baptist Church	2727 Shadow Ln	Charleston	SC
Lydia Baptist Church	506 E Owens Dr	Summerville	SC
Mt Zion Baptist Church	360 Dunmeyer Hill Rd	Summerville	SC
My Father's House Ministry	9653 Highway 78	Ladson	SC
New Beginnings Christian Church	10054 Highway 78	Ladson	SC
Northwood Assembly	8717 Rivers Ave	North Charleston	SC
Palmetto Land Baptist Church	114 Tomaka Dr	Summerville	SC
Philadelphia Baptist Church	3288 Ladson Rd	Ladson	SC
Pleasant Grove Baptist Church	10360 Highway 78 E	Summerville	SC
Sangaree Baptist Church	415 Sangaree Parkway B	Summerville	SC
Summerville Church-Nazarene	10825 Highway 78 E	Summerville	SC
Summit Church	3347 Ladson Rd	Ladson	SC
Tall Pines Baptist Church	645 Treeland Dr	Ladson	SC
United House-Prayer	2284 Otranto Rd	Charleston	SC

Community feature	Location		
Wesley United Methodist Church	3250 Ladson Rd	Ladson	SC
Westview Baptist Church	2705 Fernwood Dr	Charleston	SC
Word in Life Christian Fellowship	119 Slate Stone Dr	Summerville	SC
World Wide Deliverance Church	408 Eastover Cir	Summerville	SC
Cemeteries			
Cherry Hill Cemetery	Market Road	Ladson	SC
Schools			
Ladson Elementary School	3321 Ladson Road	Ladson	SC
Colleges			
Charleston Southern University	9200 University Boulevard	Charleston	SC
Community centers			
New Dimensions Community Center	9433 Highway 78	Ladson	SC
Parks			
North Charleston Wannamaker County Park	8888 University Boulevard	North Charleston	SC
Emergency facilities			
C&B Vol. Fire Dept. Hqtrs.	509 Royle Road	Ladson	SC
C&B Vol. Fire Dept., Benchmark Station	3217 Benchmark Drive	Ladson	SC
C&B Vol. Fire Dept., Farmington Station	137 Farmington Road	Summerville	SC
Hospitals			
Trident Medical Center	9330 Medical Plaza Drive	North Charleston	SC
Major activity nodes			
Coastal Carolina Fairgrounds/Exchange Park	9850 Highway 78	Ladson	SC
North Main Market/Azalea Square	215 Azalea Square Blvd	Summerville	SC

Segment 2 is primarily a transportation corridor with major highways and I-26 traversing north to south in the central portion of the segment. Churches in Segment 2 range from the more established, such as Philadelphia Baptist Church and Trinity Missionary Baptist Church, to newer churches congregating in commercial facilities, such as Journey Church and Faith Goose Creek. A portion of North Charleston Wannamaker Park is within Segment 2. The park features playgrounds, multi-use pathways, picnic areas, disc golf, a dog park, and other amenities within its 1,015 acre site north of the convergence of US 78 and US 52 (Charleston County Parks 2019).

Ladson Elementary School, along Ladson Road, west of US 78, serves over 900 students in Segment 2 (Charleston County School District 2019). Other primary and secondary schools are in the vicinity but outside the CCR study area. Trident Medical Center is located at the intersection of I-26 and US 78 (Figure 9). The center is a 313-bed facility with a 24-hour emergency room and a Level II Trauma Center (Trident Health System 2019). Charleston

Southern University, across US 78 from Trident Medical Center, was established in 1965 and currently offers 18 undergraduate degrees and one doctoral degree to its 3,600 students (Charleston Southern University 2019).



Figure 9 Trident Medical Center

3.3.4 Socioeconomic Characteristics

To further characterize Segment 2, USCB block group- or census tract-level demographic and economic factors are provided in this section. Data for the entirety of Segment 2 are presented to give context to the individual USCB geographies that make up the segment. Segment 2 data are compared with the study area characteristics given above. Twenty-four whole or partial USCB block groups within 16 census tracts are encompassed by Segment 2, as shown in Figure 10 and presented in Table 19.

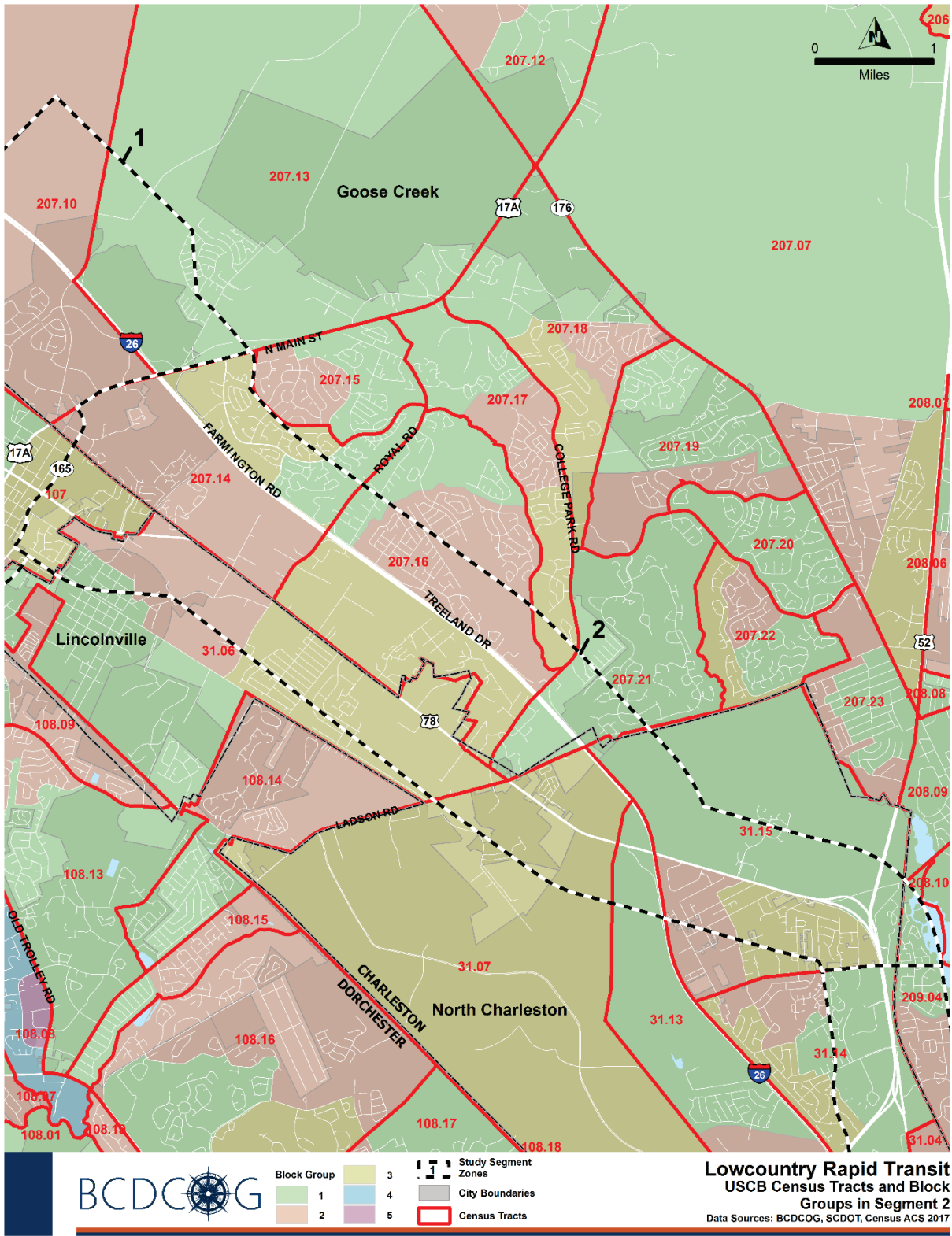


Figure 10 USCBA Census Tracts and Block Groups in Segment 2

Population Trends

Population data for Segment 2 and the 24 Segment 2 block groups are provided in Table 19 based on the 2010 Census and the 2017 ACS. Between 2010 and 2017, the human population increased across Segment 2 and in a majority of Segment 2 block groups, and most portions of Segment 2 increased at rates higher than the study area in its entirety (8.7 percent). While not shown on Table 19, population density in Segment 2 was higher than the study area as a whole. The population of Segment 2 composed 26.3 percent of the overall study area population.

Table 19 Segment 2 Population Trends

Geography	2010 Census population	2017 ACS population	% Change (2010-2017)
Segment 2	19,457	22,457	15.4
CT 31.06 BG 1	162	267	65.1
CT 31.06 BG 2	424	350	-17.6
CT 31.06 BG 3	2,334	2,326	-0.3
CT 31.07 BG 3	341	303	-11.1
CT 31.13 BG 1	261	348	33.1
CT 31.14 BG 1	0	1	24.0
CT 31.15 BG 1	1,340	1,368	2.1
CT 31.15 BG 2	505	441	-12.7
CT 31.15 BG 3	2,739	4,061	48.3
CT 107 BG 3	1,190	1,416	19.0
CT 207.10 BG 2	1	1	26.1
CT 207.13 BG 1	1	1	15.9
CT 207.14 BG 1	962	882	-8.3
CT 207.14 BG 2	1,600	1,825	14.0
CT 207.14 BG 3	1,728	1,832	6.0
CT 207.15 BG 2	0	0	10.6
CT 207.16 BG 1	287	389	35.7
CT 207.16 BG 2	2,719	3,476	27.8
CT 207.16 BG 3	1,265	1,496	18.3
CT 207.17 BG 3	263	339	29.2
CT 207.21 BG 1	968	961	-0.7
CT 208.09 BG 1	1	0	-21.0
CT 208.10 BG 1	0	0	21.0
CT 209.04 BG 1	367	376	2.5

Sources: 2010 Census, 2017 ACS

Housing and Other Demographic Factors

Table 20 shows other demographic factors in Segment 2, according to the 2017 ACS. Populations in all but three Segment 2 block groups were slightly more urban than the segment as a whole. The median ages for Segment 2 and eight of the 24 Segment 2 block groups were higher than the median age across the study area (32.2). Racial and ethnic diversity across Segment 2 and in a majority of the Segment 2 block groups was less than the study area as a whole, where 51.7 percent of people identified as “White alone.” The major exceptions to this trend were in three Segment 2 block groups, where the White alone population was between 37 and 44 percent. Similar to the study area, the highest educational attainment of most people 25 years old and older was a high school diploma or equivalency, and of the people who completed an associate’s degree or higher, more obtained a bachelor’s degree than other degrees.

Table 20 Other Segment 2 Demographic Factors

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor’s degree
Segment 2	99.9	36.3 ¹	59.9	20.4	9.5
CT 31.06 BG 1	100.0	35.9	51.6	26.1	21.9
CT 31.06 BG 2	100.0	38.1	50.0	33.2	21.9
CT 31.06 BG 3	100.0	32.0	41.8	44.0	8.8
CT 31.07 BG 3	94.9	33.3	44.0	34.7	23.1
CT 31.13 BG 1	100.0	28.8	64.7	20.0	17.1
CT 31.14 BG 1	100.0	29.3	50.0	29.8	19.1
CT 31.15 BG 1	100.0	22.7	67.0	17.6	27.6
CT 31.15 BG 2	100.0	41.0	74.1	17.4	2.4
CT 31.15 BG 3	100.0	24.7	37.1	32.2	12.8
CT 107 BG 3	100.0	32.0	67.5	38.8	17.0
CT 207.10 BG 2	72.0	29.3	71.9	22.4	20.5
CT 207.13 BG 1	88.1	41.0	71.1	34.3	13.8
CT 207.14 BG 1	100.0	42.1	77.6	26.4	19.7
CT 207.14 BG 2	100.0	40.7	84.2	31.4	31.2
CT 207.14 BG 3	100.0	41.2	61.9	32.4	12.4
CT 207.15 BG 2	100.0	42.2	85.7	28.2	14.2
CT 207.16 BG 1	100.0	31.0	52.1	32.7	3.7
CT 207.16 BG 2	100.0	36.6	61.5	28.9	12.0
CT 207.16 BG 3	100.0	37.1	81.7	48.7	1.5
CT 207.17 BG 3	100.0	33.2	70.2	45.6	9.2
CT 207.21 BG 1	100.0	41.5	72.6	24.1	19.3
CT 208.09 BG 1	100.0	52.8	77.8	19.6	16.3

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor's degree
CT 208.10 BG 1	100.0	32.2	—	27.6	19.1
CT 209.04 BG 1	100.0	37.0	64.5	29.5	31.8

Sources: 2010 Census, 2017 ACS

— indicates no data

¹ A median factored from a set of medians

Table 21 presents housing characteristics for Segment 2 and its associated block groups, according to the 2017 ACS. The total number of housing units in Segment 2 accounted for 24.3 percent of all housing units in the study area (35,592). Overall, across Segment 2 and in all but four associated block groups, a lower percentage of housing units were vacant than the study area as a whole (13.6 percent). Median home values in Segment 2 are generally lower than the study area median of \$172,250. While across Segment 2 and in 16 associated block groups, median rents were higher than the study area median of \$982, in eight block groups, rents were lower.

Table 21 Segment 2 Housing Characteristics

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
Segment 2	8,651	7.8	60.0	\$164,150 ¹	\$1,040 ¹
CT 31.06 BG 1	113	5.2	78.1	\$173,400	\$1,167
CT 31.06 BG 2	173	22.6	50.3	\$97,100	\$1,117
CT 31.06 BG 3	782	1.4	72.5	\$117,100	\$939
CT 31.07 BG 3	155	7.2	46.6	\$89,100	\$969
CT 31.13 BG 1	170	6.2	48.1	\$148,900	\$1,146
CT 31.14 BG 1	0	5.6	19.0	\$190,700	\$1,063
CT 31.15 BG 1	461	11.4	32.1	\$164,800	\$1,030
CT 31.15 BG 2	270	24.9	82.6	—	\$831
CT 31.15 BG 3	1,463	5.4	26.9	\$163,400	\$821
CT 107 BG 3	714	6.7	49.0	\$200,300	\$775
CT 207.10 BG 2	0	0.0	61.8	\$184,200	\$1,240
CT 207.13 BG 1	0	3.4	74.1	\$170,200	\$1,108
CT 207.14 BG 1	438	12.7	85.0	\$124,800	\$1,013
CT 207.14 BG 2	853	8.6	71.1	\$179,700	\$1,133
CT 207.14 BG 3	691	0.4	64.6	\$171,100	\$970
CT 207.15 BG 2	0	3.5	71.8	\$134,200	\$1,149
CT 207.16 BG 1	125	5.7	72.5	\$134,800	\$988
CT 207.16 BG 2	1,117	6.9	76.3	\$164,600	\$1,383

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
CT 207.16 BG 3	528	19.9	67.6	—	\$1,108
CT 207.17 BG 3	134	14.4	58.0	\$113,500	\$1,170
CT 207.21 BG 1	340	2.3	85.7	\$333,600	\$976
CT 208.09 BG 1	0	12.8	83.6	\$163,700	\$1,010
CT 208.10 BG 1	0	2.9	64.7	\$149,600	\$1,049
CT 209.04 BG 1	125	0.0	76.2	\$192,800	\$921

Source: 2017 ACS
— indicates no data

¹ A median factored from a set of medians

Economic Factors

Table 22 provides 2017 ACS estimates for several economic factors in the 16 census tracts overlapped by Segment 2. The civilian labor force in Segment 2 amounted to 29.0 percent of the total civilian workforce population of the study area (41,779). The unemployment rate for Segment 2 and the majority of associated census tracts was lower than the study area as a whole (7.0 percent), whereas six of the Segment 2 census tracts have higher unemployment rates than the study area.

Median household incomes across Segment 2 and in all but three associated census tract were higher than the study area as a whole (\$43,125). While three Segment 2 census tracts had higher poverty rates for people in families than the study area (19.7 percent), Segment 2 as a whole and 13 associated census tracts had lower rates.

Table 22 Segment 2 Economic Factors

Geography	Civilian labor force population	Unemployment rate	Median household income	Poverty rate, people in families
Segment 2 ¹	12,110	6.2	\$51,780 ²	12.7 ³
CT 31.06	1,931	11.5	\$53,500	17.4
CT 31.07	331	9.5	\$35,280	17.1
CT 31.13	194	9.0	\$44,145	7.4
CT 31.14	0	4.3	\$49,051	17.7
CT 31.15	2,120	5.6	\$38,559	31.6
CT 107	516	6.5	\$36,456	20.4
CT 207.10	0	3.8	\$64,587	1.4
CT 207.13	0	7.3	\$61,182	4.3
CT 207.14	2,946	5.7	\$65,720	5.1
CT 207.15	0	6.9	\$50,060	17.1
CT 207.16	3,166	3.3	\$61,755	7.5
CT 207.17	177	9.4	\$49,415	15.0

Geography	Civilian labor force population	Unemployment rate	Median household income	Poverty rate, people in families
CT 207.21	525	5.4	\$79,969	2.9
CT 208.09	0	7.2	\$48,478	13.6
CT 208.10	0	4.8	\$56,088	19.9
CT 209.04	202	4.5	\$73,576	5.2

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² A median factored from a set of medians

³ An average of rates reported for census tracts

3.3.5 Environmental Justice and Language Use

USCB block group- or census tract-level data are provided in this section to characterize EJ and LEP factors in Segment 2. Data for the entirety of Segment 2 are presented to give context to the individual USCB geographies that make up the segment. Segment 2 data are compared with the study area characteristics given above.

Minority Populations

Table 23 presents the 2017 ACS minority population percentages for Segment 2, as well as the portions of the overall population that identified as races and ethnicities other than the USCB one-race category “White alone.” Segment 2 as a whole and the majority of associated block groups had a minority population percentage that was lower than the study area, where 48.3 percent of the population identified as a minority. However, six block groups in Segment 2 had larger minority populations proportionally than the study area, and the percentages in three of these block groups (CT 31.06 BG 3, CT 31.07 BG 3, and CT 31.15 BG 3) exceeded the 50-percent threshold noted as significant in EJ guidance. Like the study area, the prominent minority race or ethnicity across Segment 2 was Black or African American, and Hispanic populations ranked as the second most numerous.

Table 23 Segment 2 Minority Populations

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
Segment 2	40.1	30.1	0.6	2.2	0.0	4.1	3.2	7.1
CT 31.06 BG 1	48.4	35.3	0.0	3.7	0.0	2.9	6.5	4.7
CT 31.06 BG 2	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0
CT 31.06 BG 3	58.2	43.7	0.4	1.5	0.0	10.9	1.6	13.7
CT 31.07 BG 3	56.0	48.0	0.0	0.0	0.0	5.2	2.8	7.7
CT 31.13 BG 1	35.3	17.2	0.9	3.6	0.0	7.8	5.8	16.6
CT 31.14 BG 1	50.0	43.3	0.0	1.3	0.0	1.8	3.6	7.0
CT 31.15 BG 1	33.0	29.3	0.1	1.0	0.4	0.0	2.3	2.8
CT 31.15 BG 2	25.9	21.8	0.0	2.6	0.0	0.0	1.5	28.5

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
CT 31.15 BG 3	62.9	57.0	0.3	1.8	0.0	0.0	3.8	3.8
CT 107 BG 3	32.5	23.5	2.5	0.0	0.0	2.6	3.9	5.6
CT 207.10 BG 2	28.1	21.4	0.0	2.1	0.0	2.3	2.4	5.2
CT 207.13 BG 1	28.9	15.0	1.5	1.9	0.0	5.5	5.1	7.7
CT 207.14 BG 1	22.4	18.9	0.0	0.0	0.0	0.0	3.6	1.4
CT 207.14 BG 2	15.8	4.9	0.0	3.0	0.0	6.7	1.2	8.9
CT 207.14 BG 3	38.1	33.8	0.0	2.0	0.0	0.9	1.4	1.8
CT 207.15 BG 2	14.3	11.0	0.7	0.0	0.0	0.0	2.6	0.7
CT 207.16 BG 1	47.9	26.3	1.8	0.0	0.0	13.4	6.5	19.8
CT 207.16 BG 2	38.5	23.2	1.3	3.5	0.0	4.0	6.5	5.1
CT 207.16 BG 3	18.3	4.9	0.0	3.3	0.0	10.1	0.0	10.1
CT 207.17 BG 3	29.8	22.4	0.0	3.0	0.0	3.9	0.5	7.9
CT 207.21 BG 1	27.4	10.4	1.4	3.1	0.0	7.8	4.7	14.3
CT 208.09 BG 1	22.2	20.5	0.0	0.0	0.0	0.0	1.7	1.2
CT 208.10 BG 1	—	—	—	—	—	—	—	21.7
CT 209.04 BG 1	35.5	25.9	0.0	8.4	0.0	0.0	1.2	0.8

Source: 2017 ACS

— indicates no data

Af. Am. = Black or African American; Am. Indian / AK Native = American Indian and Alaska Native

Note: EJ populations are emboldened

Low-Income Populations

Table 24 provides per capita income and poverty rates for Segment 2 and the 16 census tracts overlapped by Segment 2, based on the 2017 ACS. As shown, per capita income rates were higher in Segment 2 as a whole and in seven of the 16 associated census tracts than in the study area, where \$25,824 was the average per capita income. Nine Segment 2 census tracts had per capita income rates that were lower than in the study area; however, none of the Segment 2 census tracts had per capita income rates at or lower than the 2017 poverty threshold (\$12,752).

In nine Segment 2 census tracts (CT 31.06, CT 31.07, CT 31.14, CT 31.15, CT 107, CT 207.15, CT 207.17, CT 208.09, and CT 208.10), poverty rates figured for all people were higher than the official U.S. poverty rate (12.3 percent), while poverty rates across Segment 2 and in 15 of the 16 associated census tracts were lower than the study area average of 23.7 percent.

Table 24 Segment 2 Low-Income Populations

Geography	Per capita income	Poverty rate, all people
Segment 2 ¹	\$26,076 ²	11.7 ²
CT 31.06	\$24,722	18.4
CT 31.07	\$22,479	19.4
CT 31.13	\$21,738	11.6
CT 31.14	\$27,153	16.2
CT 31.15	\$18,727	27.6
CT 107	\$29,119	22.3
CT 207.10	\$23,714	4.5
CT 207.13	\$30,550	6.4
CT 207.14	\$31,376	8.1
CT 207.15	\$23,938	16.6
CT 207.16	\$23,179	8.5
CT 207.17	\$19,975	17.0
CT 207.21	\$35,009	4.8
CT 208.09	\$26,299	13.1
CT 208.10	\$25,058	21.0
CT 209.04	\$34,180	6.6

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² An average of data reported for block groups

Note: EJ populations are emboldened

Limited English Proficiency Populations

LEP populations and their associated portions of the total population 5 years old and older in Segment 2 are shown in Table 25, as reported in the 2017 ACS. While no Segment 2 LEP population meets the DOJ LEP threshold, Spanish-speaking LEP populations make up the majority of the overall Segment 2 LEP population.

Table 25 Segment 2 limited English Proficiency Populations

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Segment 2	392	1.9	119	0.6	56	0.3	0	0.0
CT 31.06 BG 1	5	0.1	1	0.0	0	0.0	0	0.0
CT 31.06 BG 2	3	0.0	0	0.0	0	0.0	0	0.0
CT 31.06 BG 3	38	0.1	0	0.0	0	0.0	0	0.0
CT 31.07 BG 3	12	0.1	0	0.0	0	0.0	0	0.0

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
CT 31.13 BG 1	6	0.0	0	0.0	7	0.1	0	0.0
CT 31.14 BG 1	0	0.0	0	0.1	0	0.0	0	0.0
CT 31.15 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 31.15 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 31.15 BG 3	33	0.0	15	0.0	0	0.0	0	0.0
CT 107 BG 3	56	0.1	0	0.0	0	0.0	0	0.0
CT 207.10 BG 2	0	0.1	0	0.0	0	0.0	0	0.0
CT 207.13 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 207.14 BG 1	13	0.0	0	0.0	0	0.0	0	0.0
CT 207.14 BG 2	29	0.0	0	0.0	0	0.0	0	0.0
CT 207.14 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 207.15 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 207.16 BG 1	10	0.1	0	0.0	0	0.0	0	0.0
CT 207.16 BG 2	53	0.1	103	0.2	39	0.1	0	0.0
CT 207.16 BG 3	73	0.1	0	0.0	0	0.0	0	0.0
CT 207.17 BG 3	6	0.0	0	0.0	10	0.1	0	0.0
CT 207.21 BG 1	40	0.2	0	0.0	0	0.0	0	0.0
CT 208.09 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 208.10 BG 1	0	0.5	0	0.1	0	0.2	0	0.0
CT 209.04 BG 1	16	0.1	0	0.0	0	0.0	0	0.0

Source: 2017 ACS

3.4 Segment 3 – Otranto to Carner

Segment 3 is approximately 12.9 square miles, physically constituting 33.8 percent of the study area. The segment is composed of portions of Charleston County and a small portion of Berkeley County, as shown on Figure 11. The City of North Charleston comprises the majority of Segment 3, and extreme western portions of the City of Hanahan are also within Segment 3. Several subdivisions and neighborhoods are encompassed by Segment 3, as listed in Appendix 1 and shown on Figure 11.

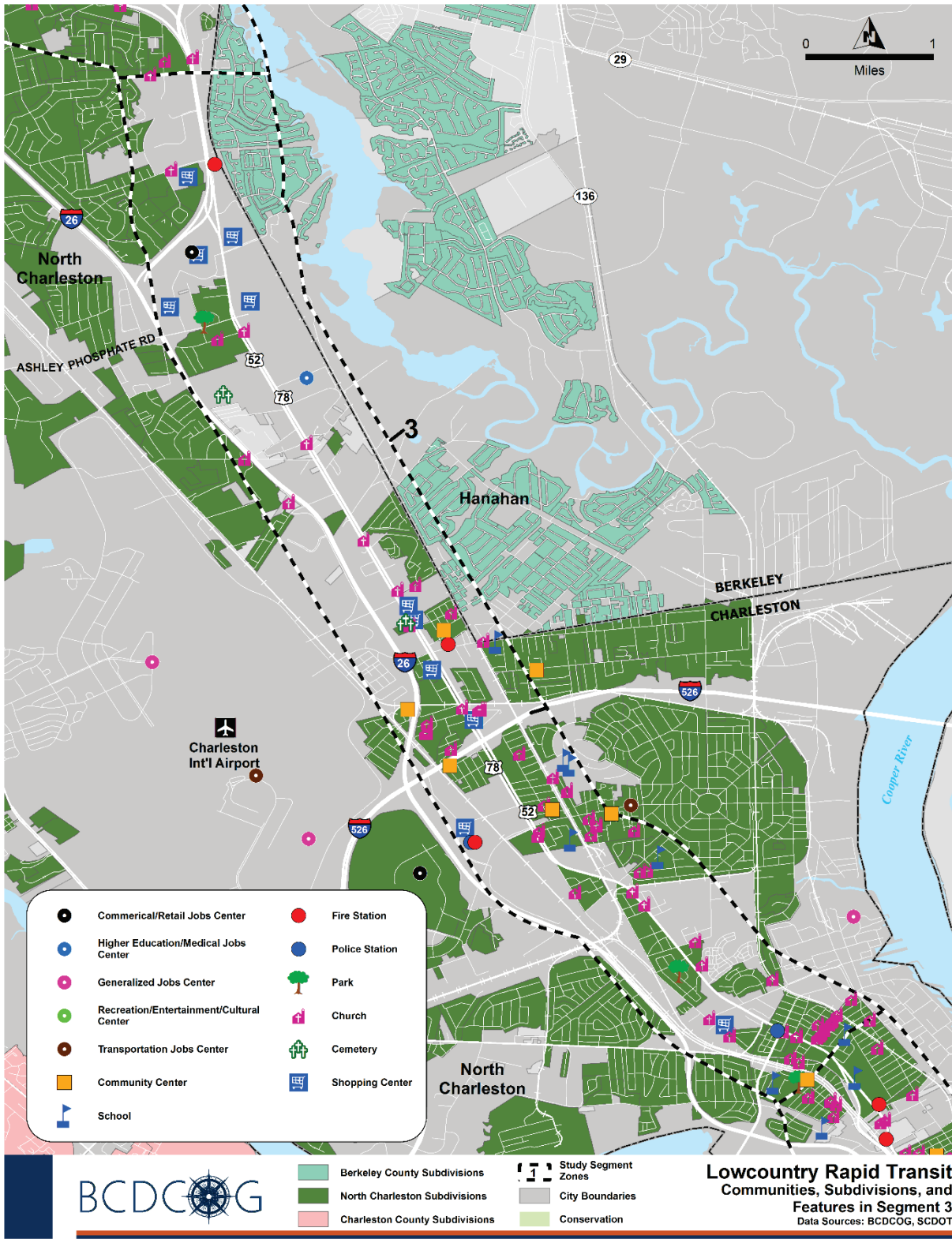


Figure 11 Communities, Subdivisions, and Features in Segment 3

3.4.1 North Charleston

The City of North Charleston is the third largest city in the state, with incorporated areas in Berkeley, Charleston, and Dorchester counties. The 76.6-square mile city is bordered by Charleston to the south and east, the City of Hanahan to the north and east, the City of Goose Creek to the northeast, the unincorporated community of Ladson to the north, and the Town of Summerville to the northwest (USCB 2019b). The Ashley River forms a large part of the southwest border of the city, and the Cooper River forms the southeastern border. Residential, commercial, industrial, and military dominate land uses in North Charleston (City of North Charleston 2019b). North Charleston had a population of 97,471 in 2010 and had grown to 108,304 by 2015 (USCB 2019a). Access to North Charleston is provided by I-26, I-526, and US 78.

In the seventeenth century, around 60 plantations operated in the North Charleston area, cultivating such crops as silk, indigo, roses, and other flowering plants (City of North Charleston 2019b). Railroads were established between Charleston and the Rivers Avenue vicinity of what became North Charleston in the 1800s, and an economic boom resulted from the mining of phosphate and the subsequent production of fertilizer. Beginning around 1864, Liberty Hill was settled by people previously enslaved at area plantations. Chicora Park was established by the City of Charleston in the 1890s as a destination for wealthy Charlestonians. Lumbering was active on the eastern side of North Charleston, between the Charleston Naval Base and Goose Creek. As areas were timbered by the E.P. Burton Lumber Company, the land was sold to other companies, such as Oakdene Cotton Compress, Texaco, and Read Phosphate Company.

In 1901, the Navy established the Charleston Naval Yard, and was active in shipbuilding and repair throughout the twentieth century (City of North Charleston 2019b). The North Charleston Development Corporation was formed in 1914 to build residences in the area, and the area's initial residents settled in the same year. Over time, many residential areas in North Charleston emerged to support local military operations and private industries, such as manufacturing (EPA and LAMC 2018). Public services, such as street lights, water and sewage, garbage disposal, and fire protection were provided to the area beginning in 1934 (City of North Charleston 2019b). By 1942, the population rose to 18,000 people due to increases in Navy and other military personnel. North Charleston was incorporated in 1972, becoming the state's ninth largest city. The Charleston Naval Base, which was formed from the Charleston Naval Yard in 1945, closed in 1996, and approximately \$1.4 billion in annual expenditures were lost. However, private industries and other businesses leased properties once associated with the base. Retail sales, hotels, and Boeing Aircraft operations, which began in 2009, are all important aspects of North Charleston's present-day economy. Since the early 2000s, multiple new residential developments have been completed into North Charleston to help support an influx of new people and families, often moving to the area for employment such as those in North Charleston.

3.4.2 Hanahan

The City of Hanahan is located in southern Berkeley County, with its limits on the west and south contiguous with the boundary between Berkeley and Charleston counties. Hanahan is bordered on the west and south by the City of North Charleston, to the east by the former Naval

Weapons Annex, a former submarine base that remains federal property, and to the east and north by the City of Goose Creek and unincorporated portions of Berkeley County. Hanahan is a mixed-use community consisting of light residential, open forested, and commercial land uses (Berkeley County 2018). Hanahan had a population of approximately 18,000 in 2010 and had grown to an estimated population of 25,000 by 2017 (USCB 2019a). Access to Hanahan is provided by N. Rhett Avenue, Yeamans Hall Road, and Murray Drive. The city has a total area of 11.5 square miles.

An Atlantic Coast Line Railroad station was built in future Hanahan in 1719 (City of Hanahan 2019b). In 1903, construction of the Saxon Pumping Station was completed. The name of Saxon Pumping Station and the Atlantic Coast Line Railroad station at Highland Park were renamed Hanahan Pumping Station and Hanahan Stop, respectively, after Ross Hanahan, an employee of the Commissioners of Public Works in the City of Charleston. In 1928, the Commissioners of Public Works petitioned the Berkeley County Delegation to have a bridge constructed across Turkey Creek. The House of Representatives passed an Act naming the area the Highland Park Water and Sewer Authority in 1941, but by 1948, the House passed another Act renaming the area the Hanahan Public Service Commission. Hanahan was incorporated on September 21, 1973. Today, continued growth is expected as more people move to the area for work and to enjoy the many recreational benefits that exist.

3.4.3 Major Community Features

Like Segment 2, major community features concentrate in the central portion of Segment 3, particularly surrounding US 78/US 52 (Rivers Avenue), as I-26 skirts the western edge of Segment 3. The features include schools, churches, community centers, parks, and emergency facilities, as presented on Table 26. Known subdivisions and neighborhoods in Segment 3 are listed in Appendix 1 and shown on Figure 11, as delineated by BCDCOG or the associated municipality or county.

Table 26 Segment 3 Major Community Features

Community feature	Location		
Churches			
Abyssinia Baptist Church	4656 Nesbit Ave	North Charleston	SC
Advent Lutheran Church	3347 Rivers Ave	Charleston	SC
Bethel Pentecostal Church	4914 Nesbit Ave	North Charleston	SC
Bethel Pentecostal Holiness	2331 Elder Ave	North Charleston	SC
Biblical House Of God	2205 Van Buren Ave	North Charleston	SC
Canaan Missionary Baptist Church	1561 Mosstree Rd	North Charleston	SC
Celebration Station	1935 Reynolds Ave	North Charleston	SC
Charity Baptist Church	1544 E Montague Ave	North Charleston	SC
Charleston Church Of Christ	9802 Highway 78	Ladson	SC
Cherokee Place United Methodist	2105 Cosgrove Ave	Charleston	SC
Christ Cathedral	3311 Ottawa Ave	North Charleston	SC

Community feature	Location		
Christ Universal Ctr	3300 Rexton St	North Charleston	SC
Church Of The Living God	4755 Rivers Ave	North Charleston	SC
Crusade Deliverance Church	4301 Rivers Ave	North Charleston	SC
Emanuel Holiness Temple	1925 Reynolds Ave	North Charleston	SC
Enoch Chapel Methodist Church	2355 James Bell Dr	North Charleston	SC
Ferndale Baptist Church	4870 Piedmont Ave	North Charleston	SC
First Baptist Church	4217 Rivers Ave	Charleston	SC
Grace Bible Chapel	3935 Whipper Barony Ln	Charleston	SC
Greater Joy Tabernacle	3775 Spruill Ave	North Charleston	SC
House Of God	1913 Gumwood Blvd	North Charleston	SC
Inner City Praise & Worship	2060 Harley St	North Charleston	SC
Jerusalem Baptist Church	3317 Meeting Street Rd	North Charleston	SC
Kingdom Hall-Jehovah's Witness	1521 Mosstree Rd	North Charleston	SC
Light Of The World Church of God	1937 Jason St	North Charleston	SC
Living Waters Assembly Of God	3680 Meeting Street Rd	North Charleston	SC
Lord Of The Harvest Christian	3680 Meeting Street Rd	North Charleston	SC
Metanoia	2005 Reynolds Ave	North Charleston	SC
Midland Park United Methodist	2301 Midland Park Rd	North Charleston	SC
Miracle Faith & Deliverance	1815 Reynolds Ave	Charleston	SC
Mt Moriah Baptist Church	7396 Rivers Ave	North Charleston	SC
Mt Olive Pentecostal Holiness	2008 Reynolds Ave	North Charleston	SC
Nation Of Islam	1921 Reynolds Ave	North Charleston	SC
New Bethel Reformed Episcopal	1941 Helm Ave	Charleston	SC
New Covenant Church Of God	2010 Hawthorne Dr	North Charleston	SC
New Life Missionary Baptist Church	2070 Harley St	North Charleston	SC
New Victory Temple	4754 Rivers Ave	Charleston	SC
Noah's Ark Baptist Church	2158 Keever St	Charleston	SC
Northwood Baptist Church	2200 Greenridge Rd	North Charleston	SC
Oak Grove Baptist Church	2149 W Oak Grove Rd	North Charleston	SC
Our Father's House	2242 Wren St	North Charleston	SC
Pilgrim Baptist Church	5371 Rivers Ave	North Charleston	SC
Resurrected Church-Jesus Church	2345 Elder Ave	North Charleston	SC
Resurrected Life Ministry	1906 Reynolds Ave	North Charleston	SC
Rock-Truth Deliverance Temp	5000 Gaynor St	North Charleston	SC
Royal Baptist Church	1807 Pearson St	North Charleston	SC

Community feature	Location		
Royal Baptist Church	4761 Luella Ave	North Charleston	SC
Shiloh AME Church	3570 Meeting Street Rd	North Charleston	SC
St Matthew Baptist	2005 Reynolds Ave	North Charleston	SC
St Paul AME Church	6925 Rivers Ave	North Charleston	SC
St Peters AME Church	4650 Sanders Ave	North Charleston	SC
Tabernacle Of Prayer-People	2012 Reynolds Ave	Charleston	SC
Tree Of Life Ministries	6337 Rivers Ave	North Charleston	SC
Union Baptist Church	4428 Daley Ave	Charleston	SC
Voice Of The Lord Intl Church	1861 Remount Rd	North Charleston	SC
Washington United Methodist Church	1816 Success St	North Charleston	SC
World Overcomers	6060 Rivers Ave	North Charleston	SC
Cemeteries			
Carolina Memorial Gardens	7113 Rivers Avenue	North Charleston	SC
Oak Grove Cemetery	5885 Rivers Avenue	North Charleston	SC
Schools			
Academic Magnet High School	5109-A West Enterprise St.	North Charleston	SC
Charleston County School Of The Arts	5109-B West Enterprise St.	North Charleston	SC
Chicora School of Communications	3795 Spruill Ave.	North Charleston	SC
Malcolm C. Hursey Elementary School	4542 Simms St.	North Charleston	SC
Mary Ford Elementary School	3180 Thomasina Mcpherson Blvd.	North Charleston	SC
Matilda F. Dunston Primary School	1825 Remount Rd.	North Charleston	SC
Morningside Middle School	1999 Singley Ln.	North Charleston	SC
Colleges			
Trident Technical College	7000 Rivers Avenue	North Charleston	SC
Community centers			
Charleston Farms Community Center	1633 Summer Avenue	North Charleston	SC
Felix Pinckney Community Center	4764 Hassell Avenue	North Charleston	SC
Ferndale Community Center	1925 Iron Street	North Charleston	SC
Highland Terrace Community Center	2401 Richardson Drive	North Charleston	SC
Perry-Webb Community Center	3200 Appleton Avenue	North Charleston	SC
Persephone-Moultrie Community Center	1919 Robertson Boulevard	North Charleston	SC
Russelldale Community Center	2248 Russelldale Avenue	North Charleston	SC
Parks			
Accabee Park	3200 Appleton Avenue	North Charleston	SC
Hillsdale Park	2280 Ashley Phosphate Road	North Charleston	SC

Community feature	Location		
Whipper Barony Park	3885 Chestnut Street	North Charleston	SC
Emergency facilities			
NCFD HQ	2500 City Hall Lane	North Charleston	SC
NCFD Station 3	2014 Remount Road	North Charleston	SC
NCFD Station 6	8100 Rivers Avenue	North Charleston	SC
North Charleston PD	2500 City Hall Lane	North Charleston	SC
North Charleston PD South	3401 Rivers Avenue	North Charleston	SC
Major activity nodes			
Charles Towne Square	2401 Mall Drive	North Charleston	SC
Gaslite Square Shopping Center	5617 Rivers Avenue	North Charleston	SC
North Charleston Center	5001 Coliseum Drive	North Charleston	SC
North Point Plaza	7400 Rivers Avenue	North Charleston	SC
North Rivers Marketplace	7250 Rivers Avenue	North Charleston	SC
Northwoods Mall	2150 Northwoods Boulevard	North Charleston	SC
Palmetto Shopping Center	735-9199 Rivers Avenue	North Charleston	SC
Rivers Park Mall		North Charleston	SC
Shipwatch Square	3655 Rivers Avenue	Summerville	SC

Segment 3 is primarily characterized by commercial and retail areas along Rivers Avenue, where many older shopping areas, such as Northwoods Mall, are set off the roadway, framed by large parking areas. Parks and community centers are primarily located within established residential areas. Numerous churches of various denominations are also located in Segment 3. The churches vary from the more established, such as St. Peters AME Church, the oldest church in North Charleston, established around 1867, to the more recent, such as Kingdom Hall-Jehovah's Witness.

Educational facilities within Segment 3 include several elementary, secondary, and postsecondary schools. Trident Technical College is a two-year college that offers over 150 programs to its 15,000 students. Trident Tech, as it's often called, includes transfer programs for those students continuing at four-year colleges and beyond (Trident Technical College 2019). While numerous middle and elementary schools are located within Segment 3, Charleston School of the Arts and Academic Magnet High School are two of the more non-traditional learning opportunities in Segment 3.

In more recent years, growth in Segment 3 has accelerated. In addition to more established neighborhoods such as Liberty Hill, newer housing developments have been built, such as Mixson, Hope's Point, Oak Terrace Preserve, and Horizon Village developments (AECOM 2010). Mixson is a mixed-use, walkable neighborhood being developed in Park Circle. Hope's Point is located in a private borough near the Liberty Hill neighborhood and offers 11 single-

family detached units. Oak Terrace Preserve, located at the northern boundary of Liberty Hill and Howard Heights, is a sustainable redevelopment project that began selling in 2006 and will have a total of 376 detached and townhome units at build-out. Horizon Village is a Hope VI redevelopment located north of the Chicora/Cherokee neighborhood. It will have 126 public housing units, 124 rent-controlled apartments, 130 single-family homes (a percentage of which will be at full market rate), and 104 units for the elderly and disabled. About 100 homes and rentals are available in The Manor, a multi-story apartment community for the elderly, and Marshside, which has townhomes for seniors. Barony Place Apartments has 240 units designed to look like homes, and none of the buildings contain more than four units.

3.4.4 Socioeconomic Characteristics

USCB block group- or census tract-level demographic and economic factors are provided in this section in an effort to further characterize Segment 3. Data for the entirety of Segment 3 are presented to give context to the individual USCB geographies that make up the segment. Segment 3 data are compared with the study area characteristics given above. Forty whole or partial USCB block groups within 20 census tracts are encompassed by Segment 3, as shown in Figure 12.

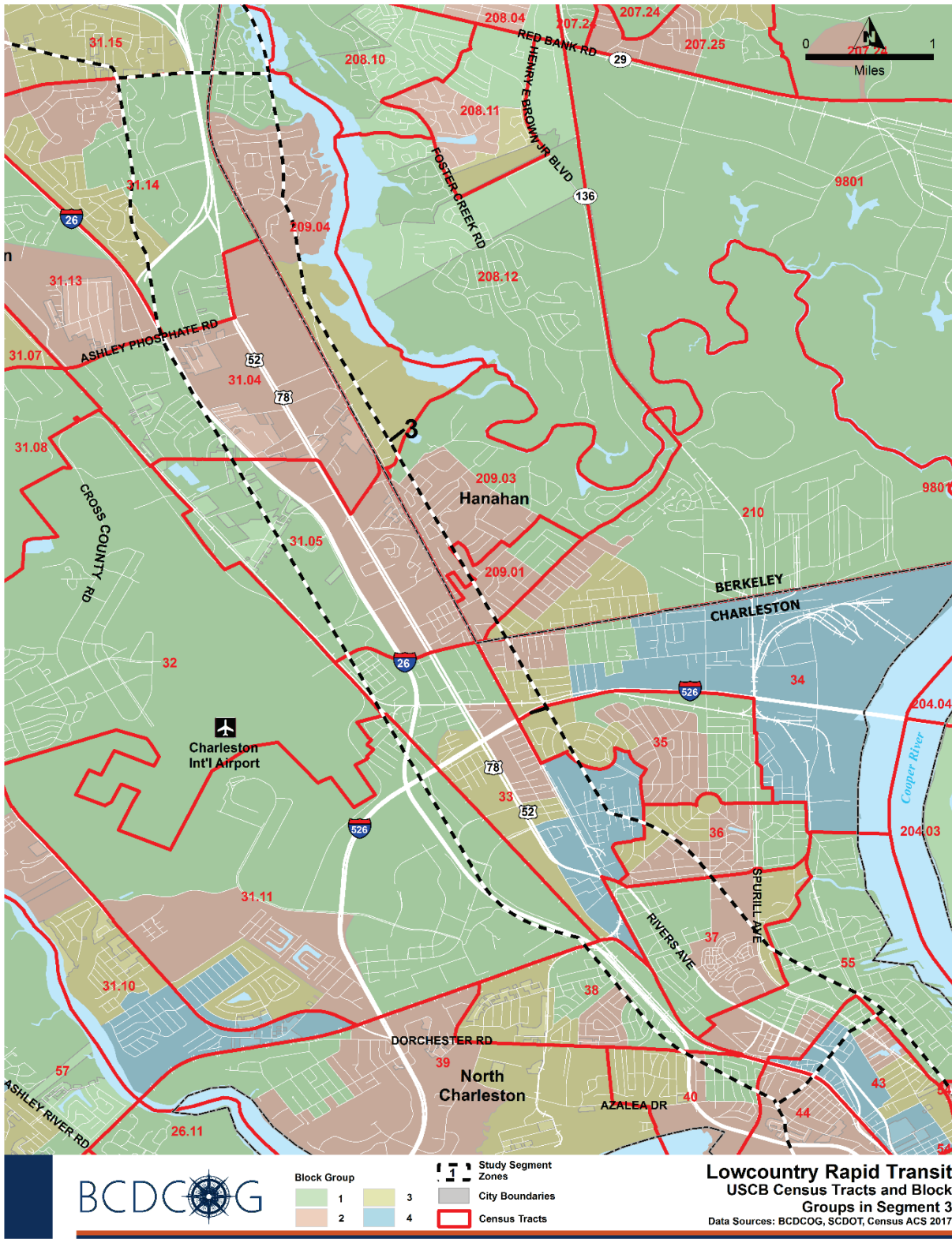


Figure 12 USCB Census Tracts and Block Groups in Segment 3

Population Trends

Population data for Segment 3 and the 40 Segment 3 block groups are provided in Table 27 based on the 2010 Census and the 2017 ACS. Between 2010 and 2017, the human population increased across Segment 3 and in a majority of Segment 3 block groups, and most portions of Segment 3 increased at rates higher than the study area in its entirety (8.7 percent). Seventeen Segment 3 block groups experienced population declines in this period. While not shown on Table 27, population density in Segment 3 was lower than the study area as a whole. The population of Segment 3 composes 27.6 percent of the overall study area population.

Table 27 Segment 3 Population Trends

Geography	2010 Census population	2017 ACS population	% Change (2010-2017)
Segment 3	21,379	23,575	10.3
CT 31.04 BG 1	203	202	-0.8
CT 31.04 BG 2	2,178	2,521	15.7
CT 31.05 BG 1	953	902	-5.3
CT 31.05 BG 2	1,864	2,234	19.8
CT 31.11 BG 1	193	151	-21.6
CT 31.13 BG 2	1	1	2.2
CT 31.14 BG 1	3,144	3,899	24.0
CT 31.14 BG 2	4	5	27.7
CT 31.14 BG 3	251	260	3.6
CT 31.15 BG 1	0	0	2.1
CT 31.15 BG 3	1	2	48.3
CT 33 BG 1	529	336	-36.3
CT 33 BG 2	941	1,472	56.4
CT 33 BG 3	1,054	883	-16.2
CT 33 BG 4	1,032	1,176	13.9
CT 34 BG 2	268	277	3.4
CT 34 BG 3	499	407	-18.4
CT 35 BG 3	151	264	74.9
CT 36 BG 2	452	364	-19.5
CT 36 BG 3	161	297	84.0
CT 37 BG 1	1,106	1,055	-4.6
CT 37 BG 2	1,552	1,877	21.0
CT 37 BG 3	77	70	-9.4
CT 38 BG 1	737	633	-14.1
CT 38 BG 2	22	24	8.8

Geography	2010 Census population	2017 ACS population	% Change (2010-2017)
CT 40 BG 1	418	486	16.2
CT 40 BG 2	10	8	-12.6
CT 40 BG 3	4	4	0.4
CT 43 BG 1	344	323	-6.2
CT 43 BG 4	157	146	-6.7
CT 44 BG 2	98	116	18.2
CT 55 BG 1	35	47	32.9
CT 55 BG 2	706	535	-24.2
CT 209.01 BG 2	305	403	32.0
CT 209.03 BG 1	28	37	31.8
CT 209.03 BG 2	428	432	1.0
CT 209.04 BG 1	348	357	2.5
CT 209.04 BG 2	900	1,049	16.6
CT 209.04 BG 3	170	250	46.6
CT 210 BG 3	55	69	26.3

Sources: 2010 Census, 2017 ACS

Housing and Other Demographic Factors

Table 28 shows other demographic factors in Segment 3, according to the 2017 ACS. Populations in Segment 3 are considered 100 percent urban. The median ages for half of the Segment 3 block groups were lower than the median age across the study area (32.2), while the segment as a whole had a median age equal to that of the study area. Racial and ethnic diversity across Segment 3 and in a majority of the Segment 3 block groups was greater than the study area as a whole, where 51.7 percent of people identified as “White alone.” Similar to the study area, the highest educational attainment of most people 25 years old and older was a high school diploma or equivalency, and of the people who completed an associate’s degree or higher, more obtained a bachelor’s degree than other degrees.

Table 28 Other Segment 3 Demographic Factors

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor’s degree
Segment 3	100.0	32.2 ¹	41.1	21.3	7.4
CT 31.04 BG 1	100.0	31.7	53.7	29.6	6.5
CT 31.04 BG 2	100.0	26.9	37.5	38.3	8.1
CT 31.05 BG 1	100.0	27.5	41.9	32.2	10.2
CT 31.05 BG 2	100.0	29.0	53.7	34.9	4.4
CT 31.11 BG 1	100.0	39.1	31.2	38.2	13.1

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor's degree
CT 31.13 BG 2	100.0	35.0	50.8	28.6	6.5
CT 31.14 BG 1	100.0	29.3	50.0	29.8	19.1
CT 31.14 BG 2	100.0	49.8	—	61.4	9.7
CT 31.14 BG 3	100.0	31.9	65.5	25.6	31.5
CT 31.15 BG 1	100.0	22.7	67.0	17.6	27.6
CT 31.15 BG 3	100.0	24.7	37.1	32.2	12.8
CT 33 BG 1	100.0	46.3	41.2	42.0	8.0
CT 33 BG 2	100.0	28.6	35.1	32.0	0.9
CT 33 BG 3	100.0	43.3	43.1	45.8	3.0
CT 33 BG 4	100.0	30.4	5.7	37.2	6.1
CT 34 BG 2	100.0	28.1	50.0	37.0	5.4
CT 34 BG 3	100.0	37.1	25.7	28.2	3.8
CT 35 BG 3	100.0	37.0	92.5	3.2	54.7
CT 36 BG 2	100.0	44.3	61.0	22.2	20.4
CT 36 BG 3	100.0	28.6	57.6	25.6	51.0
CT 37 BG 1	100.0	46.8	28.3	47.5	8.7
CT 37 BG 2	100.0	24.8	6.6	30.3	4.0
CT 37 BG 3	100.0	30.8	18.3	51.8	3.6
CT 38 BG 1	100.0	27.8	10.0	49.4	7.8
CT 38 BG 2	100.0	37.9	6.7	40.5	1.7
CT 40 BG 1	100.0	31.4	12.0	52.2	7.6
CT 40 BG 2	100.0	26.8	4.0	53.0	1.9
CT 40 BG 3	100.0	37.0	7.9	44.2	4.5
CT 43 BG 1	100.0	34.5	27.7	15.7	0.0
CT 43 BG 4	100.0	38.8	15.3	42.4	12.1
CT 44 BG 2	100.0	32.0	12.9	24.2	3.4
CT 55 BG 1	100.0	43.0	18.3	45.4	2.3
CT 55 BG 2	100.0	43.8	30.7	37.6	17.4
CT 209.01 BG 2	100.0	30.0	61.5	41.6	13.3
CT 209.03 BG 1	100.0	35.8	80.6	28.1	18.5
CT 209.03 BG 2	100.0	48.9	90.8	28.7	15.2
CT 209.04 BG 1	100.0	37.0	64.5	29.5	31.8
CT 209.04 BG 2	100.0	42.1	92.6	21.6	17.2
CT 209.04 BG 3	100.0	26.8	55.5	21.7	30.8

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor's degree
CT 210 BG 3	100.0	32.4	68.6	31.3	5.8

Sources: 2010 Census, 2017 ACS

— indicates no data

¹ A median factored from a set of medians

Table 29 presents housing characteristics for Segment 3 and its associated block groups, according to the 2017 ACS. The total number of housing units in Segment 3 accounted for 29.1 percent of all housing units in the study area (35,592). Overall across Segment 3 and in 23 associated block groups, a lower percentage of housing units were vacant than the study area as a whole (13.6 percent). Major exceptions to this were in 17 block groups, where vacancy rates ranged between 14.1 and 52.6 percent. Median home values in Segment 3 and in all but eight associated block groups were lower than the study area median of \$172,250. Across Segment 3 and in all but 10 associated block groups, median rents were lower than the study area median of \$982.

Table 29 Segment 3 Housing Characteristics

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
Segment 3	10,347	11.5	31.6	\$111,150 ¹	\$882 ¹
CT 31.04 BG 1	86	14.7	26.8	82,900	752
CT 31.04 BG 2	981	11.8	23.9	14,400	938
CT 31.05 BG 1	339	14.1	28.9	104,700	788
CT 31.05 BG 2	848	5.8	45.8	23,900	888
CT 31.11 BG 1	89	14.6	16.7	56,300	890
CT 31.13 BG 2	1	25.5	42.7	118,900	895
CT 31.14 BG 1	1,884	5.6	19.0	190,700	1,063
CT 31.14 BG 2	2	0.0	85.7	159,300	882
CT 31.14 BG 3	116	20.4	73.6	155,000	1,191
CT 31.15 BG 1	0	11.4	32.1	164,800	1,030
CT 31.15 BG 3	1	5.4	26.9	163,400	821
CT 33 BG 1	164	17.3	58.0	106,000	1,069
CT 33 BG 2	528	8.3	26.7	—	721
CT 33 BG 3	498	24.3	26.5	66,800	751
CT 33 BG 4	493	19.3	36.5	84,100	962
CT 34 BG 2	126	31.1	17.4	76,500	697
CT 34 BG 3	187	11.8	39.1	86,200	850
CT 35 BG 3	117	1.8	91.2	245,400	—
CT 36 BG 2	226	26.7	58.1	195,400	1,031

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
CT 36 BG 3	128	15.5	48.7	192,700	1,271
CT 37 BG 1	553	11.8	35.2	108,200	770
CT 37 BG 2	849	13.4	3.4	59,100	841
CT 37 BG 3	55	52.6	33.9	264,200	630
CT 38 BG 1	207	2.6	41.2	74,200	934
CT 38 BG 2	9	4.5	27.0	—	900
CT 40 BG 1	139	0.0	21.4	80,000	832
CT 40 BG 2	3	15.4	30.2	59,600	860
CT 40 BG 3	2	14.3	43.8	87,800	831
CT 43 BG 1	211	13.4	4.3	—	663
CT 43 BG 4	66	19.7	38.8	60,500	613
CT 44 BG 2	42	12.9	20.9	73,100	872
CT 55 BG 1	20	16.4	13.8	114,100	883
CT 55 BG 2	358	23.2	18.5	159,400	877
CT 209.01 BG 2	165	6.9	49.1	131,900	997
CT 209.03 BG 1	16	2.2	37.5	235,200	822
CT 209.03 BG 2	158	4.0	89.7	164,700	607
CT 209.04 BG 1	118	0.0	76.2	192,800	921
CT 209.04 BG 2	423	3.1	69.9	230,200	1,158
CT 209.04 BG 3	112	5.0	0.0	—	1,063
CT 210 BG 3	24	11.2	26.2	131,800	915

Source: 2017 ACS

— indicates no data

¹ A median factored from a set of medians

Economic Factors

Table 30 provides 2017 ACS estimates for several economic factors in the 20 census tracts overlapped by Segment 3. The civilian labor force in Segment 3 amounted to 29.9 percent of the total civilian workforce population of the study area (41,779). The unemployment rate for Segment 3 and the majority of associated census tracts was higher than the study area as a whole (7.0 percent), whereas nine of the Segment 3 census tracts had lower unemployment rates than the study area.

Median household income rates across Segment 3 and in all but six associated census tracts were lower than the study area as a whole (\$43,125). Segment 3 as a whole and 12 associated census tracts had higher poverty rates for people in families than the study area (19.7 percent).

Table 30 Segment 3 Economic Factors

Geography	Civilian labor force population	Unemployment rate	Median household income	Poverty rate, people in families
Segment 3 ¹	12,508	7.4	\$29,872 ²	26.3 ³
CT 31.04	1,875	6.9	\$25,917	45.7
CT 31.05	1,314	7.8	\$26,717	45.5
CT 31.11	229	8.5	\$28,888	18.4
CT 31.13	0	9.0	\$44,145	7.4
CT 31.14	2,749	4.3	\$49,051	17.7
CT 31.15	0	5.6	\$38,559	31.6
CT 33	2,073	10.5	\$28,341	31.8
CT 34	81	9.9	\$25,068	47.1
CT 35	152	0.8	\$54,375	2.7
CT 36	393	0.8	\$48,698	17.7
CT 37	1,515	12.3	\$23,979	31.2
CT 38	469	11.8	\$30,452	37.5
CT 40	138	9.1	\$29,292	27.2
CT 43	174	8.4	\$22,384	38.1
CT 44	28	8.3	\$22,888	33.4
CT 55	79	8.7	\$19,266	36.1
CT 209.01	152	2.0	\$37,339	26.5
CT 209.03	207	4.4	\$49,917	6.9
CT 209.04	871	4.5	\$73,576	5.2
CT 210	7	4.2	\$36,875	17.8

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² A median factored from a set of medians

³ An average of rates reported for census tracts

3.4.5 Environmental Justice and Language Use

USCB block group- or census tract-level data are provided in this section to characterize EJ and LEP factors in Segment 3. Data for the entirety of Segment 3 are presented to give context to the individual USCB geographies that make up the segment. Segment 3 data are compared with the study area characteristics given above.

Minority Populations

Table 31 presents the 2017 ACS minority population percentages for Segment 3, as well as the portions of the overall population that identified as races and ethnicities other than the USCB one-race category “White alone.” Segment 3 as a whole and the majority of associated block groups had minority population percentages that were higher than the study area, where 48.3 percent of the population identified as a minority. The percentages for the entirety of Segment 3

and 22 of these block groups (see emboldened geographies in Table 31) exceeded the 50-percent threshold noted as significant in EJ guidance. Like the study area, the prominent minority race or ethnicity across Segment 3 was Black or African American, and Hispanic populations ranked as the second most numerous.

Table 31 Segment 3 Minority Populations

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
Segment 3	58.9	53.6	0.0	0.9	0.0	1.9	2.4	15.5
CT 31.04 BG 1	46.3	29.5	0.5	2.4	0.0	12.4	1.6	38.8
CT 31.04 BG 2	62.5	50.3	0.0	0.4	0.0	9.4	2.4	30.9
CT 31.05 BG 1	58.1	54.1	0.0	0.0	0.0	3.6	0.3	36.2
CT 31.05 BG 2	46.3	41.0	0.0	0.0	0.0	1.3	3.9	37.5
CT 31.11 BG 1	68.8	64.5	0.0	3.2	0.0	0.0	1.1	21.7
CT 31.13 BG 2	49.2	31.8	0.0	0.0	0.0	0.0	17.4	15.1
CT 31.14 BG 1	50.0	43.3	0.0	1.3	0.0	1.8	3.6	7.0
CT 31.14 BG 2	—	—	—	—	—	—	—	3.0
CT 31.14 BG 3	34.5	30.5	0.0	1.1	0.0	1.0	1.9	0.0
CT 31.15 BG 1	33.0	29.3	0.1	1.0	0.4	0.0	2.3	2.8
CT 31.15 BG 3	62.9	57.0	0.3	1.8	0.0	0.0	3.8	3.8
CT 33 BG 1	58.8	58.8	0.0	0.0	0.0	0.0	0.0	0.0
CT 33 BG 2	64.9	64.9	0.0	0.0	0.0	0.0	0.0	30.4
CT 33 BG 3	56.9	56.9	0.0	0.0	0.0	0.0	0.0	27.5
CT 33 BG 4	94.3	84.6	0.0	0.0	0.0	0.0	9.7	1.5
CT 34 BG 2	50.0	50.0	0.0	0.0	0.0	0.0	0.0	31.6
CT 34 BG 3	74.3	61.6	1.7	0.0	0.0	2.5	8.5	21.6
CT 35 BG 3	7.5	7.5	0.0	0.0	0.0	0.0	0.0	1.4
CT 36 BG 2	39.0	35.8	0.0	0.0	0.0	0.0	3.2	2.1
CT 36 BG 3	42.4	42.4	0.0	0.0	0.0	0.0	0.0	3.2
CT 37 BG 1	71.7	68.3	0.0	1.7	0.0	0.0	1.6	5.4
CT 37 BG 2	93.4	92.0	0.0	0.7	0.0	0.0	0.8	3.6
CT 37 BG 3	81.7	81.7	0.0	0.0	0.0	0.0	0.0	0.0
CT 38 BG 1	90.0	88.4	0.0	0.0	0.0	0.0	1.6	0.5
CT 38 BG 2	93.3	93.3	0.0	0.0	0.0	0.0	0.0	0.0
CT 40 BG 1	88.0	86.8	0.0	0.0	0.0	0.0	1.2	4.0
CT 40 BG 2	96.0	96.0	0.0	0.0	0.0	0.0	0.0	0.0
CT 40 BG 3	92.1	86.3	0.0	0.0	0.0	0.0	5.8	2.7

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
CT 43 BG 1	72.3	72.3	0.0	0.0	0.0	0.0	0.0	19.4
CT 43 BG 4	84.7	82.3	0.0	2.5	0.0	0.0	0.0	1.0
CT 44 BG 2	87.1	86.2	0.0	0.9	0.0	0.0	0.0	2.9
CT 55 BG 1	81.7	80.7	0.0	0.0	0.0	0.0	1.0	0.0
CT 55 BG 2	69.3	66.7	0.0	2.6	0.0	0.0	0.0	0.0
CT 209.01 BG 2	38.5	30.6	0.0	0.0	0.0	3.3	4.6	20.6
CT 209.03 BG 1	19.4	15.1	0.0	0.0	0.0	1.8	2.5	5.1
CT 209.03 BG 2	9.2	3.7	0.0	1.9	0.0	0.0	3.6	7.0
CT 209.04 BG 1	35.5	25.9	0.0	8.4	0.0	0.0	1.2	0.8
CT 209.04 BG 2	7.4	1.3	0.0	4.2	0.0	0.0	2.0	6.1
CT 209.04 BG 3	44.5	37.5	0.0	5.6	0.0	0.0	1.4	2.3
CT 210 BG 3	31.4	6.8	0.0	0.0	0.0	23.2	1.5	41.5

Source: 2017 ACS

— indicates no data

Af. Am. = Black or African American; Am. Indian / AK Native = American Indian and Alaska Native

Note: EJ populations are emboldened

Low-Income Populations

Table 32 provides per capita income and poverty rates for Segment 3 and the 20 census tracts overlapped by Segment 3, based on the 2017 ACS. As shown, per capita income rates were lower in Segment 3 as a whole and in 15 associated census tracts than in the study area, where \$25,824 was the average per capita income. Only five Segment 3 census tracts had per capita income rates that were higher than in the study area. However, none of the Segment 3 census tracts had per capita income rates at or lower than the 2017 poverty threshold (\$12,752).

Across Segment 3 and in 16 associated census tracts (see emboldened geographies in Table 32), poverty rates figured for all people were higher than the official U.S. poverty rate (12.3 percent). Poverty rates in Segment 3 and in 12 associated census tracts were higher than the study area average of 23.7 percent.

Table 32 Segment 3 Low-Income Populations

Geography	Per capita income	Poverty rate, all people
Segment 3¹	\$20,219²	27.3²
CT 31.04	\$13,872	42.6
CT 31.05	\$13,021	40.7
CT 31.11	\$18,778	20.4
CT 31.13	\$21,738	11.6
CT 31.14	\$27,153	16.2
CT 31.15	\$18,727	27.6

Geography	Per capita income	Poverty rate, all people
CT 33	\$14,551	33.0
CT 34	\$13,826	44.8
CT 35	\$35,374	6.8
CT 36	\$27,091	20.2
CT 37	\$18,654	33.6
CT 38	\$14,272	39.6
CT 40	\$15,535	28.3
CT 43	\$12,856	42.6
CT 44	\$14,849	36.1
CT 55	\$20,702	36.9
CT 209.01	\$16,886	27.3
CT 209.03	\$30,280	10.0
CT 209.04	\$34,180	6.6
CT 210	\$22,032	20.8

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² An average of data reported for census tracts

Note: EJ populations are emboldened

Limited English Proficiency Populations

LEP populations and their associated portions of the total population 5 years old and older in Segment 3 are shown in Table 33, as reported in the 2017 ACS. The Spanish-speaking LEP population in Segment meets the DOJ LEP threshold.

Table 33 Segment 3 Limited English Proficiency Populations

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Segment 3	1,731	8.0	111	0.5	50	0.2	16	0.1
CT 31.04 BG 1	50	0.8	5	0.1	0	0.0	0	0.0
CT 31.04 BG 2	425	0.5	0	0.0	0	0.0	0	0.0
CT 31.05 BG 1	177	0.5	0	0.0	0	0.0	0	0.0
CT 31.05 BG 2	248	0.3	0	0.0	0	0.0	12	0.0
CT 31.11 BG 1	3	0.0	0	0.0	0	0.0	0	0.0
CT 31.13 BG 2	0	0.1	0	0.0	0	0.0	0	0.0
CT 31.14 BG 1	24	0.0	72	0.1	17	0.0	0	0.0
CT 31.14 BG 2	0	0.1	0	0.0	0	0.0	0	0.0
CT 31.14 BG 3	0	0.0	0	0.0	3	0.0	0	0.0
CT 31.15 BG 1	0	0.0	0	0.0	0	0.0	0	0.0

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
CT 31.15 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 33 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 33 BG 2	280	0.3	0	0.0	0	0.0	0	0.0
CT 33 BG 3	222	0.3	0	0.0	0	0.0	0	0.0
CT 33 BG 4	14	0.0	5	0.0	0	0.0	0	0.0
CT 34 BG 2	45	0.2	0	0.0	0	0.0	0	0.0
CT 34 BG 3	61	0.1	0	0.0	0	0.0	0	0.0
CT 35 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 36 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 36 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 37 BG 1	57	0.1	0	0.0	0	0.0	0	0.0
CT 37 BG 2	19	0.0	17	0.0	0	0.0	0	0.0
CT 37 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 38 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 38 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 40 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 40 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 40 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 43 BG 1	13	0.0	0	0.0	0	0.0	0	0.0
CT 43 BG 4	0	0.0	0	0.0	4	0.0	0	0.0
CT 44 BG 2	0	0.0	0	0.0	1	0.0	0	0.0
CT 55 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 55 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 209.01 BG 2	58	0.2	0	0.0	0	0.0	0	0.0
CT 209.03 BG 1	1	0.1	0	0.0	0	0.0	0	0.0
CT 209.03 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 209.04 BG 1	15	0.1	0	0.0	0	0.0	0	0.0
CT 209.04 BG 2	0	0.0	12	0.0	18	0.0	0	0.0
CT 209.04 BG 3	2	0.0	0	0.0	8	0.0	4	0.0
CT 210 BG 3	16	0.5	0	0.0	0	0.0	0	0.0

Source: 2017 ACS

Note: LEP populations are emboldened

Known Environmental Justice Neighborhoods

The seven LAMC neighborhoods discussed in Section 2.2, Local Plans and Initiatives, above, are within Segments 3 and 4. As mentioned, these neighborhoods were found by USACE to meet EJ criteria (AECOM 2010). One of these neighborhoods, Liberty Hill, is completely within Segment 3. Liberty Hill overlaps CT 33 BG 4 and is located along East Montague Avenue between Mixson and Gaynor avenues and generally does not extend southward of Rowan Drive or northward of Spell Lane. Liberty Hill is considered one of the oldest and most historically significant neighborhoods in North Charleston (Figure 13; AECOM 2010).



Figure 13 Liberty Hill Welcome Sign

An 82-acre portion of Liberty Hill conveyed in 1864 from William Simons to Paul Trescot, a “free person of color” (Preservation Consultants 1995). Trescot’s wife, Harriett Trescot, had previously acquired 30 acres in this vicinity. Prior to 1871, a 2-acre portion of these lands was purchased for still-extant St. Peters AME Church. By 1877, the lands had been sold by the Trescots and subdivided into smaller lots and resold by Ishmael E. Grant to several individuals. Early settlers of Liberty Hill, including Grant, were referred to as farmers in the conveyance deeds; however, Grant was also the founding pastor of St. Peters AME Church. Eventually, many residences, several churches, two cemeteries (St. Peters and Grant cemeteries), and a public school were established in Liberty Hill.

Socioeconomic and other demographic factors related to Liberty Hill can be accessed by referencing this USCB block group in the Segment 3 tables, above. Additional details regarding Liberty Hill can be accessed in the discussion of known EJ neighborhoods in Segment 4, below.

3.5 Segment 4 – Carner to Mt. Pleasant

Segment 4 is approximately 4.1 square miles and occupies 10.7 percent of the study area. The segment is completely within Charleston County. The City of Charleston comprises the majority of Segment 4, and extreme southern North Charleston composes the northern portion of the segment, as shown on Figure 14. While North Charleston composes the majority of Segment 3 and is, thus, discussed above, several EJ neighborhoods in North Charleston are fully or mostly within Segment 4 and are considered in this section. Several other subdivisions and neighborhoods are encompassed by Segment 4, and all of these are listed in Appendix 1 and also shown on Figure 14.

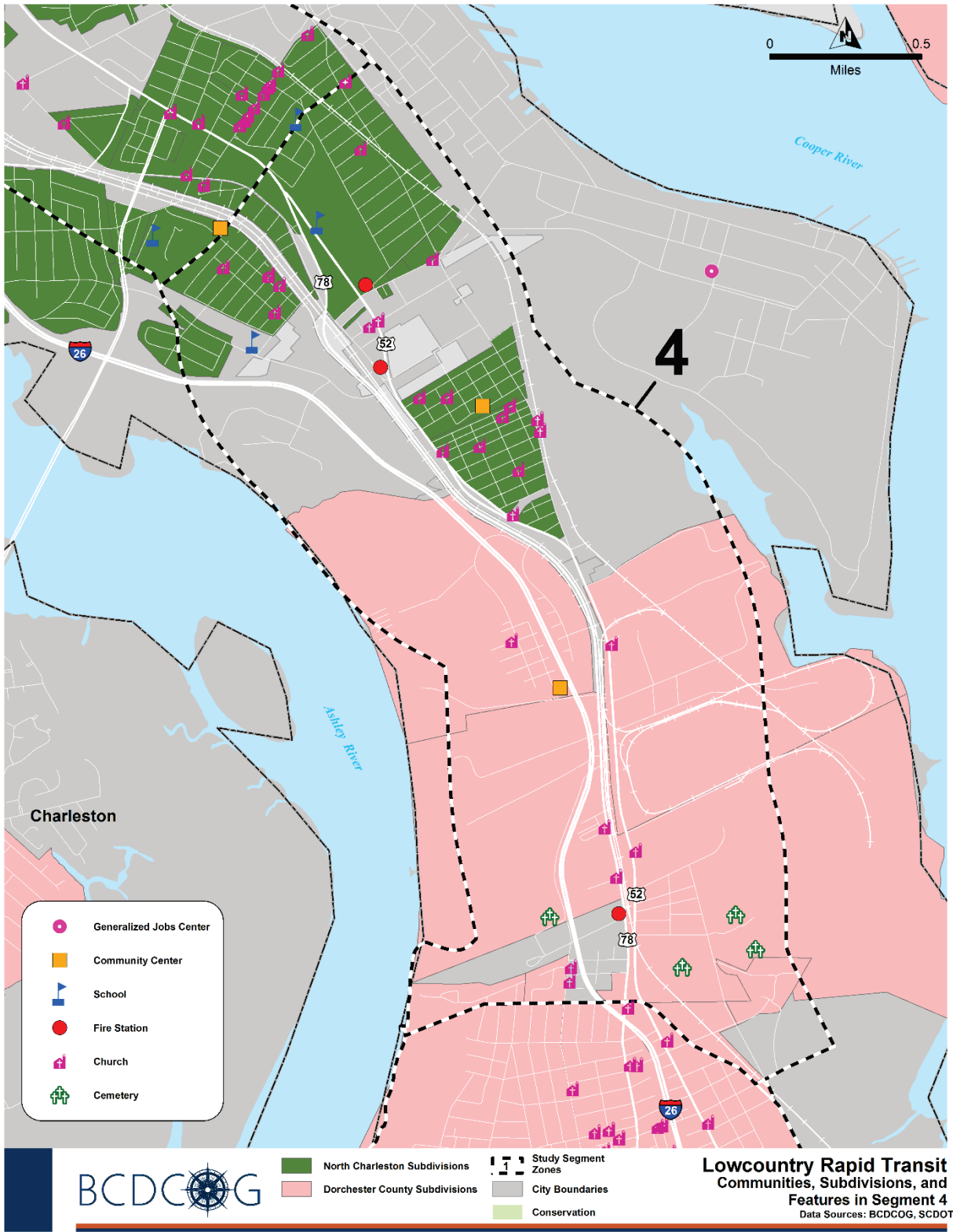


Figure 14 Communities, Subdivisions, and Features in Segment 4

3.5.1 Charleston

The City of Charleston is located just south of the geographical midpoint of South Carolina's coastline and is located on Charleston Harbor, an inlet of the Atlantic Ocean formed by the confluence of the Ashley, Cooper, and Wando rivers. Charleston is the oldest and largest city in South Carolina. Charleston is a mixed use community consisting of residential, commercial, industrial, and institutional land uses (Charleston County 2018). Many of the buildings in the city of Charleston are historic structures. As of the 2010 Census, Charleston had a population of approximately 120,000 growing to an estimated population of 135,000 in 2017 (USCB 2019a). Access to Charleston is provided by Interstate 26 and US Route 17. The city has a total area of 127.5 square miles (USCB 2019b).

Founded and settled by English colonists in 1670, Charleston grew from a colonial seaport to a wealthy city by the mid-eighteenth century. Through the mid-nineteenth century, Charleston's economy prospered due to its busy seaport and the cultivation of rice, cotton, and indigo. In April of 1861, Confederate soldiers fired on Union-occupied Fort Sumter in Charleston Harbor, thus signaling the beginning of the Civil War. Charleston was slow to recover from the devastation of the war. After the war, the city gradually lessened its dependence on agriculture and rebuilt its economy through trade and industry. Construction of the Navy Yard in 1904, just north of the city boundaries, pushed Charleston vigorously into the twentieth century. During the first few decades of the 1900s, industrial and port activities increased dramatically. Later, major sources of capital came from the Charleston Naval Base, the area's medical industry and the tourism industry. Charleston remains one of the top tourist destination in the United States. Today, approximately seven million people visit the city annually, generating an estimated economic impact of \$7.37 billion (City of Charleston 2019).

3.5.2 Major Community Features

Segment 4 consists of older, established areas of Charleston and North Charleston. Major community features include schools, churches, cemeteries, community centers, and emergency facilities, as presented on Table 34. Known subdivisions and neighborhoods in Segment 3 are listed in Appendix 1 and shown on Figure 14, as delineated by BCDCOG or the associated municipality or county.

Table 34 Segment 3 Major Community Features

Community feature	Location		
Churches			
Baptist Education Ctr	2026 Jacksonville Rd	Charleston	SC
Bethlehem Baptist Church	1981 Arbutus Ave	Charleston	SC
Church Of Christ-Rutledge A	1316 Rutledge Ave	Charleston	SC
Community Baptist Church	2329 Delano St	Charleston	SC
Emmanuel Apostolic Church	1929 Iris St	North Charleston	SC
Evening Of Prayer COGIC	2361 Spruill Ave	Charleston	SC
Evening Of Prayer Fellowship	2401 Spruill Ave	North Charleston	SC

Community feature	Location		
Grace & Truth Deliverance M	1994 Beech Ave	North Charleston	SC
Grace Community Baptist Church	2029 Delaware Ave	Charleston	SC
House Of God At Five Mile	2214 Adair St	Charleston	SC
House Of God North Union Heights	2050 Hampton Ave	Charleston	SC
Jehovah's Witness	1550 Meeting Street Rd	North Charleston	SC
Midway Baptist Church	2109 Silver St	Charleston	SC
Mt Olive Baptist Church	2416 Meeting Street Rd	Charleston	SC
New Hope Baptist Church	2900 Appleton Ave	Charleston	SC
New Life In Christ Baptist Church	2110 Monrovia St	North Charleston	SC
New St John Holiness Church	2026 Riverview Ave	Charleston	SC
New Tabernacle Of Second Church	2204 Fillmore St	Charleston	SC
Open Door United Bibleway Church	2000 Groveland Ave	Charleston	SC
People Of Color Evangelistic	1328 Rutledge Ave	Charleston	SC
Promised Land Pentecostal	2216 Meeting Street Rd	Charleston	SC
Providence AME Church	2060 Jacksonville Rd	Charleston	SC
Reformed House Of God	2925 Appleton Ave	North Charleston	SC
Reformed House Of God	2920 Appleton Ave	Charleston	SC
Rosemont Baptist Church	1856 Meeting Street Rd	North Charleston	SC
Salvation & Deliverance Chu	1916 Burton Ln	Charleston	SC
Cemeteries			
Adverse Cemetery/Memorial Baptist Church Cemetery /Morris Street Baptist Church Cemetery	Mechanic and Petty streets	North Charleston	SC
Bethany Cemetery	10 Cunnington Avenue	North Charleston	SC
Magnolia Cemetery	70 Cunnington Avenue	North Charleston	SC
Saint Lawrence Cemetery	60 Huguenin Avenue	North Charleston	SC
Schools			
Chicora Elementary School	3795 Spruill Avenue	North Charleston	SC
Military Magnet Academy	2950 Carner Avenue	North Charleston	SC
Community centers			
Freddie Whaley Community Center	1810 Doscher Avenue	North Charleston	SC
Gethsemane Community Center	2449 Beacon Street	North Charleston	SC
Emergency facilities			
CFD HQ/Station 9	1451 King Street Ext	North Charleston	SC
NCFD Station 8	2630 Meeting Street	North Charleston	SC
NCFD Station 2	2800 Carner Avenue	North Charleston	SC

Segment 4 is characterized by established residential, commercial, and industrial land uses. Many long-term residential neighborhoods, such as Five Mile and Union Heights, are located within this segment, while new development has been quite limited. The churches in Segment 4 are primarily community-oriented churches located within established neighborhoods, and frequently several churches are located in close proximity to each other, often within the same neighborhood. Segment 4 includes Magnolia and St. Lawrence cemeteries, both founded in the 1800s (Magnolia Cemetery 2019). Morris Street Baptist Church, an 1865-founded African-American church located in Segment 5, maintains a cemetery near the Ashley River in Segment 4 (Figure 15), adjacent to a cemetery of Memorial Baptist Church (Morris Street Baptist Church 2019). Educational facilities in Segment 4 include Chicora Elementary School and Military Magnet Academy, and two community centers serve residents in Segment 4.



Figure 15 Morris Street Baptist Church Cemetery

3.5.3 Socioeconomic Characteristics

USCB block group- or census tract-level demographic and economic factors are provided in this section in an effort to further characterize Segment 4. Data for the entirety of Segment 4 are presented to give context to the individual USCB geographies that make up the segment. Segment 4 data are compared with the study area characteristics given above. Twelve whole or partial USCB block groups within five census tracts are encompassed by Segment 4, as shown in Figure 16 and presented in Table 1.

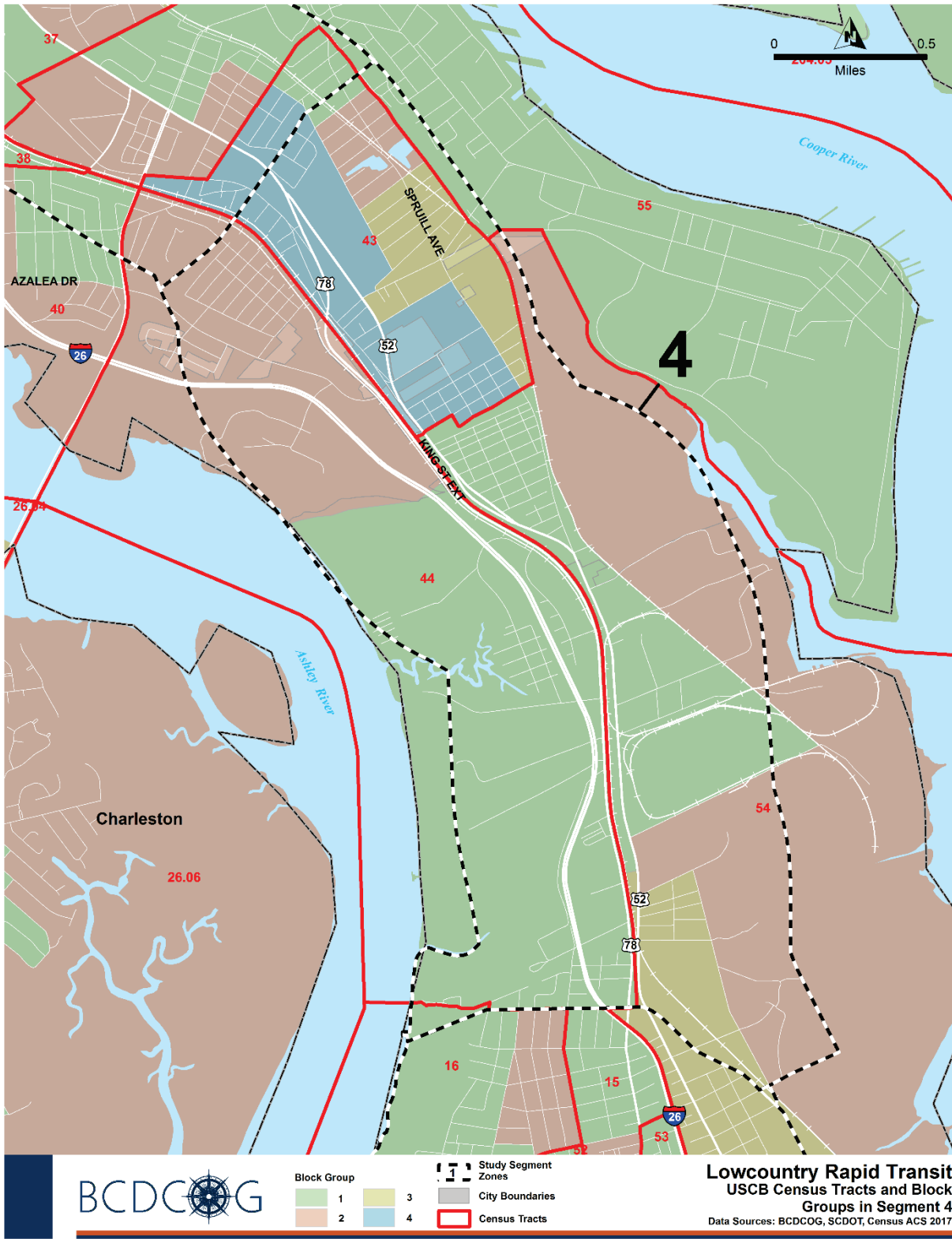


Figure 16 USCB Census Tracts and Block Groups in Segment 4

Population Trends

Population data for Segment 4 and the 12 Segment 4 block groups are provided in Table 35 based on the 2010 Census and the 2017 ACS. Between 2010 and 2017, the human population increased across Segment 4 and in a majority of associated block groups, and most portions of Segment 4 increased at rates higher than the study area in its entirety (8.7 percent). Only three Segment 4 block groups experienced population declines in this period. While not shown on Table 35, population density in Segment 4 was lower than the study area as a whole, and the population of Segment 4 composed 5.9 percent of the overall study area population.

Table 35 Segment 4 Population Trends

Geography	2010 Census population	2017 ACS population	% Change (2010-2017)
Segment 4	4,530	5,003	10.5
CT 16 BG 1	30	41	34.0
CT 16 BG 2	0	0	25.7
CT 43 BG 1	95	89	-6.2
CT 43 BG 2	555	606	9.2
CT 43 BG 3	721	982	36.2
CT 43 BG 4	670	626	-6.7
CT 44 BG 1	646	638	-1.3
CT 44 BG 2	679	803	18.2
CT 54 BG 1	684	707	3.2
CT 54 BG 2	192	200	4.1
CT 54 BG 3	248	302	21.5
CT 55 BG 1	8	10	32.9

Sources: 2010 Census, 2017 ACS

Housing and Other Demographic Factors

Table 36 shows other demographic factors in Segment 4, according to the 2017 ACS. Populations in Segment 4 are considered 100 percent urban. The median ages across Segment 4 and in a majority of associated block groups were higher than the median age across the study area (32.2). Racial and ethnic diversity across Segment 4 and in most Segment 4 block groups was greater than the study area as a whole, where 51.7 percent of people identified as “White alone.” Similar to the study area, the highest educational attainment of most people 25 years old and older was a high school diploma or equivalency, and of the people who completed an associate’s degree or higher, more obtained a bachelor’s degree than other degrees.

Table 36 Other Segment 4 Demographic Factors

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor’s degree
Segment 4	100.0	36.4 ¹	14.6	21.9	5.4

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor's degree
CT 16 BG 1	100.0	38.3	71.3	12.0	36.7
CT 16 BG 2	100.0	30.2	60.0	16.2	42.5
CT 43 BG 1	100.0	34.5	27.7	15.7	0.0
CT 43 BG 2	100.0	11.7	8.7	36.4	3.9
CT 43 BG 3	100.0	43.9	7.6	40.1	7.9
CT 43 BG 4	100.0	38.8	15.3	42.4	12.1
CT 44 BG 1	100.0	42.7	32.5	27.4	13.7
CT 44 BG 2	100.0	32.0	12.9	24.2	3.4
CT 54 BG 1	100.0	51.5	0.0	39.8	5.9
CT 54 BG 2	100.0	14.7	0.4	31.8	0.0
CT 54 BG 3	100.0	30.0	47.0	40.9	19.1
CT 55 BG 1	100.0	43.0	18.3	45.4	2.3

Sources: 2010 Census, 2017 ACS

— indicates no data

¹ A median factored from a set of medians

Table 37 presents housing characteristics for Segment 4 and its associated block groups, according to the 2017 ACS. The total number of housing units in Segment 4 accounted for 6.1 percent of all housing units in the study area (35,592). Overall across Segment 4 and in half of its associated block groups, a higher percentage of housing units were vacant than the study area as a whole (13.6 percent). Median home values in Segment 4 and in all but three associated block groups were lower than the study area median of \$172,250. Across Segment 4 and in all but four associated block groups, median rents were lower than the study area median of \$982.

Table 37 Segment 4 Housing Characteristics

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
Segment 4	2,186	21.1	36.2	\$101,150 ¹	\$838 ¹
CT 16 BG 1	17	5.2	86.3	\$512,800	\$1,779
CT 16 BG 2	0	6.8	53.9	\$312,900	\$1,464
CT 43 BG 1	58	13.4	4.3	—	\$663
CT 43 BG 2	221	32.1	15.3	\$88,200	\$804
CT 43 BG 3	472	28.0	34.7	\$86,700	\$573
CT 43 BG 4	284	19.7	38.8	\$60,500	\$613
CT 44 BG 1	324	8.2	39.6	\$163,900	\$397
CT 44 BG 2	292	12.9	20.9	\$73,100	\$872
CT 54 BG 1	328	31.2	72.2	\$66,300	\$1,016

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
CT 54 BG 2	63	3.9	0.0	—	\$329
CT 54 BG 3	123	19.5	44.5	\$263,200	\$1,366
CT 55 BG 1	4	16.4	13.8	\$114,100	\$883

Source: 2017 ACS

— indicates no data

¹ A median factored from a set of medians

Economic Factors

Table 38 provides 2017 ACS estimates for several economic factors in the five census tracts overlapped by Segment 4. The civilian labor force in Segment 4 amounted to 4.5 percent of the total civilian workforce population of the study area (41,779). The unemployment rates for Segment 4 and all but one associated census tract were higher than the study area as a whole (7.0 percent).

Median household income rates across Segment 4 and in all but one associated census tract were lower than the study area as a whole (\$43,125). Segment 4 as a whole and four of its five associated census tracts had higher poverty rates for people in families than the study area (19.7 percent).

Table 38 Segment 4 Economic Factors

Geography	Civilian labor force population	Unemployment rate	Median household income	Poverty rate, people in families
Segment 4 ¹	1,873	11.4 ¹	\$22,384 ²	33.8 ³
CT 16	45	1.4	76,250	4.5
CT 43	861	8.4	22,384	38.1
CT 44	592	8.3	22,888	33.4
CT 54	366	24.7	21,746	57.1
CT 55	9	8.7	19,266	36.1

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² A median factored from a set of medians

³ An average of rates reported for census tracts

3.5.4 Environmental Justice and Language Use

USCB block group- or census tract-level data are provided in this section to characterize EJ and LEP factors in Segment 4. Data for the entirety of Segment 4 are presented to give context to the individual USCB geographies that make up the segment. Segment 4 data are compared with the study area characteristics given above.

Minority Populations

Table 39 presents the 2017 ACS minority population percentages for Segment 4, as well as the portions of the overall population that identified as races and ethnicities other than the USCB one-race category “White alone.” Segment 4 as a whole and all but two associated block groups

had minority population percentages that were higher than the study area, where 48.3 percent of the population identified as a minority. These percentages also exceeded the 50 percent threshold noted as significant in EJ guidance (see emboldened geographies in Table 39). Like the study area, the prominent minority race or ethnicity across Segment 4 was Black or African American, and Hispanic populations ranked as the second most numerous.

Table 39 Segment 4 Minority Populations

Geography	% Minority population	% Af. Am.	% Am. Indian / AK native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
Segment 4	85.4	82.5	0.0	0.5	0.0	1.2	1.1	1.6
CT 16 BG 1	28.7	23.1	0.0	0.0	0.0	0.0	5.5	1.8
CT 16 BG 2	40.0	35.9	0.4	1.0	0.0	1.0	1.7	6.7
CT 43 BG 1	72.3	72.3	0.0	0.0	0.0	0.0	0.0	19.4
CT 43 BG 2	91.3	91.3	0.0	0.0	0.0	0.0	0.0	0.0
CT 43 BG 3	92.4	80.8	0.0	0.0	0.0	6.1	5.5	0.0
CT 43 BG 4	84.7	82.3	0.0	2.5	0.0	0.0	0.0	1.0
CT 44 BG 1	67.5	67.5	0.0	0.0	0.0	0.0	0.0	3.8
CT 44 BG 2	87.1	86.2	0.0	0.9	0.0	0.0	0.0	2.9
CT 54 BG 1	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
CT 54 BG 2	99.6	98.9	0.7	0.0	0.0	0.0	0.0	0.0
CT 54 BG 3	53.0	53.0	0.0	0.0	0.0	0.0	0.0	2.5
CT 55 BG 1	81.7	80.7	0.0	0.0	0.0	0.0	1.0	0.0

Source: 2017 ACS

— indicates no data

Af. Am. = Black or African American; Am. Indian / AK Native = American Indian and Alaska Native

Note: EJ populations are emboldened

Low-Income Populations

Table 40 provides per capita income and poverty rates for Segment 4 and the five census tracts overlapped by Segment 4, based on the 2017 ACS. As shown, per capita income rates were lower in Segment 4 as a whole and in all but one associated census tract than in the study area, where \$25,824 was the average per capita income. Only one Segment 4 census tract had a per capita income rate that was higher than in the study area. However, none of the Segment 4 census tracts had per capita income rates at or lower than the 2017 poverty threshold (\$12,752).

Across Segment 4 and in all but one associated census tract (see emboldened geographies in Table 40), poverty rates figured for all people were higher than the official U.S. poverty rate (12.3 percent). These rates were also higher than the study area average poverty rate of 23.7 percent.

Table 40 Segment 4 Low-Income Populations

Geography	Per capita income	Poverty rate, all people
Segment 4¹	\$22,380²	35.0²
CT 16	\$43,597	6.5
CT 43	\$12,856	42.6
CT 44	\$14,849	36.1
CT 54	\$19,896	53.1
CT 55	\$20,702	36.9

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² An average of data reported for census tracts

Note: EJ populations are emboldened

Limited English Proficiency Populations

LEP populations and their associated portions of the total population 5 years old and older in Segment 4 are shown in Table 41, as reported in the 2017 ACS. While no Segment 4 LEP population meets the DOJ LEP threshold, Asian or Pacific Islander language-speaking LEP populations make up the majority of the overall Segment 4 LEP population.

Table 41 Segment 4 Limited English Proficiency Populations

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Segment 4	18	0.4	0	0.0	36	0.8	0	0.0
CT 16 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 16 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 43 BG 1	4	0.0	0	0.0	0	0.0	0	0.0
CT 43 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 43 BG 3	0	0.0	0	0.0	13	0.0	0	0.0
CT 43 BG 4	0	0.0	0	0.0	15	0.0	0	0.0
CT 44 BG 1	11	0.0	0	0.0	0	0.0	0	0.0
CT 44 BG 2	3	0.0	0	0.0	8	0.0	0	0.0
CT 54 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 54 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 54 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 55 BG 1	0	0.0	0	0.0	0	0.0	0	0.0

Source: 2017 ACS

Note: LEP populations are emboldened

Known Environmental Justice Neighborhoods

The seven LAMC neighborhoods discussed in Section 2.2, Local Plans and Initiatives, above, are within Segments 3 and 4. As mentioned, USACE determined these neighborhoods to meet EJ criteria (AECOM 2010). One of these neighborhoods, Liberty Hill, is completely within Segment 3 and discussed in some detail in the Segment 3 section, above. The other LAMC neighborhoods, consisting of Accabee, Chicora/Cherokee, Five Mile, Howard Heights, Union Heights, and Windsor, are fully or mostly within Segment 4. Another African-American community of concern for LAMC, Rosemont, is also located in Segment 4. While this neighborhood was not included in a 2010 study discussed below, existing impacts to Rosemont from surrounding development and road construction are similar to that described for the others.

As mentioned prior, the Union Heights area was initially settled after the Civil War by people previously enslaved on nearby plantations (EPA and LAMC 2018). In the 1940s and 1950s, many residential areas were being constructed or newly expanded upon around the Charleston Naval Complex, including Chicora/Cherokee, Five Mile, Howard Heights, Rosemont, Union Heights, and Windsor (AECOM 2010; USGS 2019). By the 1950s and 1960s, Union Heights and nearby areas had developed into thriving working class neighborhoods with many commercial offerings for residents (EPA and LAMC 2018). Urban renewal was underway by the 1970s, and new roadways began to impact Union Heights and other LAMC neighborhoods. These changes caused people to fall into poverty and the buildings and infrastructure, into decline. When the naval operations ceased in 1996, many of the area’s middle class families relocated to more northern portions of North Charleston, and investments and associated economic opportunities in the LAMC neighborhoods suffered. Currently, the LAMC neighborhoods have many brownfields and superfund sites that limit development interest and challenge revitalization efforts.

The LAMC neighborhoods overlap several Segment 4 block groups, as shown in Table 42. Socioeconomic and other demographic factors related to the LAMC neighborhoods can be accessed by referencing these USCB block groups in the Segment 4 tables, above.

Table 42 Known EJ Neighborhoods in Segment 4

Neighborhood	USCB block group	Location
Accabee	CT 44 BG 2	Bounded by Accabee Road, CSX/Norfolk Southern Railroad Tracks on the north and east, Misroon Street on the south, and St. Simmons Drive on the west, adjacent to and southwest of Chicora/Cherokee
Chicora/Cherokee	CT 43 BG 1 CT 43 BG 2 CT 43 BG 3 CT 43 BG 4 CT 55 BG 1 CT 55 BG 2	Bounded by Reynolds and Spruill avenues on the north, Avenue D and Bainbridge Avenue on the east, Burton Lane on the south, and CSX/Norfolk Southern Railroad Tracks on the west, adjacent to and northeast of Accabee
Five Mile	CT 43 BG 3 CT 43 BG 4	Bounded by Burton Lane on the north, Spruill Avenue on the east, Hampton Avenue on the south, and Meeting Street on the west, adjacent to the south of Chicora/Cherokee
Howard Heights	CT 43 BG 3 CT 54 BG 1	Bounded by Shipyard Creek on the north, CSX Railroad Tracks on the east, and Spruill Avenue on the west, adjacent to and west of Windsor

Neighborhood	USCB block group	Location
Rosemont	CT 44 BG 1 CT 44 BG 2	Bounded by Norfolk Southern railyard to the north, King Street Extension on the east, Hagood Street on the south, and the Ashley River on the west, isolated from other residential areas
Union Heights	CT 54 BG 1	Bounded by Arbutus Avenue on the north, Spruill Avenue on the east, the convergence of Spruill Avenue and Meeting Street on the south, Meeting Street on the west, adjacent to and south of Windsor
Windsor	CT 43 BG 4 CT 54 BG 1	Bounded by Hampton Avenue on the north, Spruill Avenue on the east, Arbutus Avenue on the south, and Meeting Street on the west, adjacent to and north of Union Heights

Many of the individual properties in LAMC neighborhoods are considered to be heirs’ property, meaning that ownership is associated with a common relative from which existing property owners inherited the property (HDR stakeholder discussion, January 29, 2019). The residents of these neighborhoods also identify with regional Gullah/Geechee traditions, which emerged from practices of enslaved Africans on Antebellum plantations in the broad region (NPS 2005). Many Gullah/Geechee people in these areas maintain subsistence fishing practices, particularly on the Ashley and Cooper rivers.

As reported in 2010, average household incomes and per capita income rates in LAMC neighborhoods are low compared to the citywide average (AECOM 2010). Median household incomes ranged from roughly \$18,900 in Union Heights to \$28,700 in Accabee in 2010. Almost 10 percent of properties in the LAMC neighborhoods were foreclosed as of 2008, with a total of 299 foreclosures occurring between the short timeframe of January 2007 to June 2008.

The LAMC neighborhoods face many challenges related to the surrounding environment. Such challenges can largely be characterized as barriers to connectivity and incompatible industrial land uses surrounding these neighborhoods. Railroad tracks traverse through LAMC neighborhoods, hindering access to surrounding areas while affecting noise levels and air quality. Portions of I-26 bisect these neighborhoods and affect neighborhood character and aesthetics. Industrial development has also occurred in LAMC neighborhoods. While some operations are defunct and left behind brownfield sites, other businesses continue to operate in proximity to these residential areas.

Altogether, the various impacts to the neighborhoods limit economic opportunities, and the lack of connectivity between residential areas hinders familial and community relations (AECOM 2010; HDR stakeholder discussion, January 29, 2019, and observations, February 1, 2019). The existing impacts also suggest that the LAMC neighborhoods may be more vulnerable to future impacts and, in particular, the compounding nature of cumulative changes to the area.

3.6 Segment 5 – Mt. Pleasant to Line Street

Segment 5 is approximately 3.5 square miles and physically constitutes 9.2 percent of the study area. The segment is completely composed of portions of Charleston County and the City of Charleston, as shown on Figure 17. For information on Charleston, see the section discussing

Segment 4, above. Several named subdivisions and neighborhoods are encompassed by Segment 5, as listed in Appendix 1 and also shown on Figure 17.

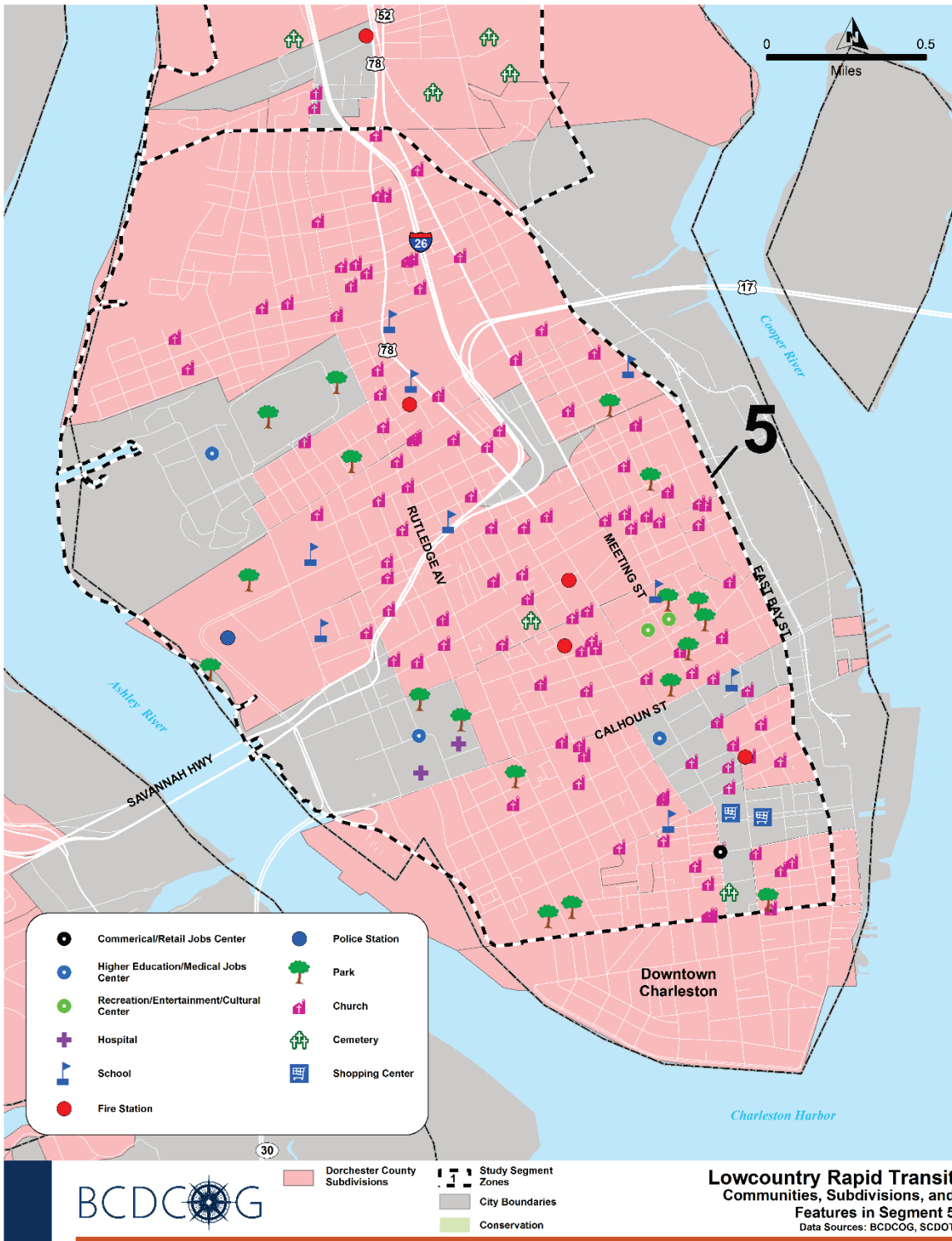


Figure 17 Communities, Subdivisions, and Features in Segment 5

3.6.1 Major Community Features

Segment 5 primarily consists of downtown Charleston. Major community features include schools, historical churches, parks, emergency facilities, and hospitals, as presented on Table 43. As mentioned above, known subdivisions and neighborhoods in Segment 5 are listed in Appendix 1 and shown on Figure 17, as delineated by BCDCOG or the associated municipality or county.

Table 43 Segment 5 Major Community Features

Community feature	Location		
Churches			
Asbury St James United Methodist	754 Rutledge Ave	Charleston	SC
Beulah United Bible Way	22 Reid St	Charleston	SC
Bethany Baptist Church	790 Meeting St	Charleston	SC
Bethel United Methodist Chu	57 Pitt St	Charleston	SC
Calvary Baptist Church	387 Sumter St	Charleston	SC
Calvary Episcopal Church	106 Line St	Charleston	SC
Cathedral Of St Luke & St P	126 Coming St	Charleston	SC
Cathedral St John The Baptist	105 Queen St	Charleston	SC
Cathedral-St John The Baptist	120 Broad St	Charleston	SC
Catholic Diocese-Charleston	119 Broad St	Charleston	SC
Catholic Student Ministry	127 Saint Philip St	Charleston	SC
Centenary Methodist Church	60 Wentworth St	Charleston	SC
Centenary United Methodist	182 Gordon St	Charleston	SC
Central Baptist Church	26 Radcliffe St	Charleston	SC
Central RMUE Church	117 President St	Charleston	SC
Chancery Office	119 Broad St	Charleston	SC
Charleston District United	51 Pitt St	Charleston	SC
Charleston Tibetan Society	12 Parkwood Ave	Charleston	SC
Charleston Wesley Foundation	273 Meeting St	Charleston	SC
Christ Gospel Church	245 Saint Philip St	Charleston	SC
Church Of The Holy Communion	218 Ashley Ave	Charleston	SC
Circular Congregational Church	150 Meeting St	Charleston	SC
Citadel Square Baptist Church	328 Meeting St	Charleston	SC
Diocese Of South Carolina	126 Coming St	Charleston	SC
Eastside Baptist Church	584 Meeting St	Charleston	SC
Ebenezer AME Church	44 Nassau St	Charleston	SC
Elmore Temple Church	135 Congress St	Charleston	SC

Community feature	Location		
Emmanuel AME Church	273 Grove St	Charleston	SC
First Church-Christ Scientist	1 Liberty St	Charleston	SC
First Church-Christ Scientist	137 Moultrie St	Charleston	SC
First Deliverance Baptist Church	105 Fishburne St	Charleston	SC
Francis Brown AME Church	9 Ashe St	Charleston	SC
French Protestant Church	44 Queen St	Charleston	SC
Friendship Baptist Church	75 America St	Charleston	SC
Gethsemane Baptist Church	180 Romney St	Charleston	SC
Gethsemene Baptist Church	6 Paige Ct	Charleston	SC
Grace Episcopal Church	98 Wentworth St	Charleston	SC
Grace Tabernacle	125 Romney St	Charleston	SC
Greater Beard Chapel AME	20 Hanover St	Charleston	SC
Greater Middleton Chapel	5 Johnson St	Charleston	SC
Greater New Zion AME Church	245 Saint Philip St	Charleston	SC
Greater Refuge Temple Church	230 Huger St	Charleston	SC
Greater St Luke AME Church	78 Gordon St	Charleston	SC
Greek Orthodox Church	30 Race St	Charleston	SC
Green Chapel Baptist Church	36 Poinsett St	Charleston	SC
Heavenly Hope Christian Ctr	119 Romney St	Charleston	SC
Holy Trinity Reformed Episcopal	51 Bull St	Charleston	SC
Hope Assembly Of God	633 King St	Charleston	SC
House Of Prayer	855 Rutledge Ave	Charleston	SC
Jerusalem Baptist Church	26 Maverick St	Charleston	SC
Life Changers Covenant Ministry	1156 King St	Charleston	SC
Line Street Church Of God	192 Line St	Charleston	SC
Manna Life Ctr	68 Spring St	Charleston	SC
Memorial Baptist Church	153 Alexander St	Charleston	SC
Morningstar Baptist Church	19 Norman St	Charleston	SC
Morris Brown AME Church	13 Morris St	Charleston	SC
Morris Street Baptist Church	25 Morris St	Charleston	SC
Mother Emanuel AME Church	110 Calhoun St	Charleston	SC
Mt Carmel AME Church	591 Rutledge Ave	Charleston	SC
Mt Carmel Pentecostal Church	52 Amherst St	Charleston	SC
Mt Hermon RMEU	179 Fishburne St	Charleston	SC
Mt Pisgah Baptist Church	191 Jackson St	Charleston	SC

Community feature	Location		
Mt Sinai Holiness Church	52 Cooper St	Charleston	SC
Mt Zion AME Church	5 Glebe St	Charleston	SC
New Antioch Missionary Baptist	18 F St	Charleston	SC
New Cannon Street Baptist Church	46 Cannon St	Charleston	SC
New Covenant Evangelistic Church	133 Congress St	Charleston	SC
New Francis Brown United	182 Gordon St	Charleston	SC
New Greater Zion Pentecostal	1220 King St	Charleston	SC
New Holmes Street Baptist C	7 Killians St	Charleston	SC
New Israel Head Start	88 Simons St	Charleston	SC
New Israel Reformed Episcopal	69 Simons St	Charleston	SC
New Tabernacle Fourth Baptist	22 Elizabeth St	Charleston	SC
Nichols Chapel AME Church	132 Bogard St	Charleston	SC
Office Of Religious Education	89 Hasell St	Charleston	SC
Old Bethel United Methodist Church	222 Calhoun St	Charleston	SC
Plymouth Congregational Church	124 Spring St	Charleston	SC
Quaker Society Of Friends	21 George St	Charleston	SC
Sacred Heart Church	888 King St	Charleston	SC
Salem Baptist Church	570 Rutledge Ave	Charleston	SC
Second Presbyterian Church	342 Meeting St	Charleston	SC
Shiloh AME Church	172 Smith St	Charleston	SC
Southside Baptist Church	87 Beaufain St	Charleston	SC
St Andrews Lutheran Church	43 Wentworth St	Charleston	SC
St Barnabas Lutheran Church	45 Moultrie St	Charleston	SC
St Johannes Lutheran Church	48 Hasell St	Charleston	SC
St John's Lutheran Church	5 Clifford St	Charleston	SC
St John's Reformed Episcopal	91 Anson St	Charleston	SC
St Luke's Reformed Episcopal	60 Nassau St	Charleston	SC
St Mark's Episcopal Church	16 Thomas St	Charleston	SC
St Mary's Catholic Church	89 Hasell St	Charleston	SC
St Matthew's Lutheran Church	405 King St	Charleston	SC
St Michael's Episcopal Church	71 Broad St	Charleston	SC
St Patrick's Catholic Church	134 Saint Philip St	Charleston	SC
St Paul Baptist Church	624 Rutledge Ave	Charleston	SC
St Phillip's Episcopal Church	142 Church St	Charleston	SC
St Stephens Episcopal Church	67 Anson St	Charleston	SC

Community feature	Location		
Tabernacle Baptist Church	51 Gordon St	Charleston	SC
Trinity AME Church	677 Meeting St	Charleston	SC
Trinity Charleston Baptist	35 Cypress St	Charleston	SC
Trinity United Methodist Church	273 Meeting St	Charleston	SC
Unitarian Church	8 Archdale St	Charleston	SC
Vanderhorst Memorial Christ	66 Hanover St	Charleston	SC
Victory Church-God In Christ	57 Drake St	Charleston	SC
Victory Church-God In Christ	16 Amherst St	Charleston	SC
Wallingford Presbyterian Church	705 King St	Charleston	SC
Wesley United Methodist Church	446 Meeting St	Charleston	SC
Zion-Olivet Presbyterian Church	134 Cannon St	Charleston	SC
Cemeteries			
Hebrew Cemetery	8 Felix Street	Charleston	SC
Quaker Churchyard	114-128 King street	Charleston	SC
Schools			
Burke High School	244 President Street	Charleston	SC
Charleston Development Academy	233 Line Street	Charleston	SC
James Simons Elementary School	741 King Street	Charleston	SC
Memminger Elementary School	20 Beaufain Street	Charleston	SC
Mitchell Elementary School	2 Perry Street	Charleston	SC
Sanders-Clyde Elementary/Middle School	805 Morrison Drive	Charleston	SC
Simmons Pinckney Middle School	244 President Street	Charleston	SC
Colleges			
College of Charleston	66 George Street	Charleston	SC
Medical University	171 Ashley Avenue	Charleston	SC
The Citadel	171 Moultrie Street	Charleston	SC
Parks			
Allan Park	365 Ashley Avenue	Charleston	SC
Brittlebank Park	185 Lockwood Drive	Charleston	SC
Cannon Park	129 Rutledge Avenue	Charleston	SC
Chapel Street Fountain Park	52 Chapel Street	Charleston	SC
Colonial Lake Park	0 Rutledge Boulevard	Charleston	SC
Hampstead Mall Playground	68 Columbus Street	Charleston	SC
Hampton Park	30 Mary Murray Drive	Charleston	SC
Marion Square	329 Meeting Street	Charleston	SC

Community feature	Location		
Martins Park	155 Jackson Street	Charleston	SC
McMahon Playground	55 Cleveland Street	Charleston	SC
Moultrie Park	41 Ashley Avenue	Charleston	SC
MUSC Horseshoe	169 Ashley Avenue	Charleston	SC
MUSC Urban Farm	40 Bee Street	Charleston	SC
Stoney Field	300 Fishburne Street	Charleston	SC
Tiedemann Playground	38 Elizabeth Street	Charleston	SC
Washington Square	80 Broad Street	Charleston	SC
Wragg Mall Park	7 Wragg Square	Charleston	SC
Wragg Square	7 Wragg Square	Charleston	SC
Emergency facilities			
Charleston PD	180 Lockwood Drive	Charleston	SC
CFD Station 15	162 Coming Street	Charleston	SC
CFD Station 6	5 Cannon Street	Charleston	SC
CFD Station 8	370 Huger Street	Charleston	SC
CFD Station 2/3	262/264 Meeting Street	Charleston	SC
Hospitals			
MUSC Med Center	171 Ashley Avenue	Charleston	SC
Roper Hospital	316 Calhoun Street	Charleston	SC
Major activity nodes			
Charleston Museum	350 Meeting Street	Charleston	SC
Charleston Place	205 Meeting Street	Charleston	SC
Charleston Visitor Center	423 King Street	Charleston	SC
King Street	King Street	Charleston	SC
Old City Market	188 Meeting Street	Charleston	SC

Charleston is a thriving tourist destination with numerous restaurants, coffee shops, bars, historic hotels, inns, and retail stores. Many historical homes and other buildings are extant in downtown Charleston, conveying a unique sense of place. Many of the churches are historical, such as the Cathedral of St. John the Baptist, Cathedral of St. Luke and St. Paul, Emmanuel AME Church, French Huguenot Church, Grace Episcopal Church, and Morris Street Baptist Church. Other long-established churches are located throughout the downtown area. Educational institutions include Burke High School and Memminger Elementary School. College of Charleston, Medical University, and The Citadel Military College are post-secondary schools in Segment 5.

Charleston has limited space for additional development, and any development that does occur in the historic downtown area must be approved by the Board of Architectural Review (BAR) (City of Charleston 2019). The BAR was established in 1931 with the creation of the first preservation ordinance in the United States. As stated in the City of Charleston Zoning Ordinance, the purpose of the board is “the preservation and protection of the old historic or architecturally worthy structures and quaint neighborhoods which impart a distinct aspect to the city and which serve as visible reminders of the historical and cultural heritage of the city, the state, and the nation.” Within the historic districts, the BAR reviews all new construction, alterations, and renovations visible from the public right-of-way. The BAR also reviews all demolitions of historical buildings (i.e., 50 years of age or older) on any structures south of Mount Pleasant Street, and any demolitions, regardless of age, within the Old and Historic District.

Downtown Charleston is interspersed with parks such as Colonial Park, Brittlebank Park, Hampton Park, and Stoney Field that provide many recreational opportunities. Activity centers include the Old City Market, Charleston Place, and Charleston Visitor Center (Figure 18). Retail shops and restaurants are located along King Street and throughout the downtown area.



Figure 18 Charleston Visitor Center

3.6.2 Socioeconomic Characteristics

USCB block group- or census tract-level demographic and economic factors are provided in this section in an effort to further characterize Segment 5. Data for the entirety of Segment 5 are

presented to give context to the individual USCB geographies that make up the segment. Segment 5 data are compared with the study area characteristics given above. Thirty-one whole or partial USCB block groups within 16 census tracts are encompassed by Segment 5, as shown in Figure 19 and presented in Table 44.

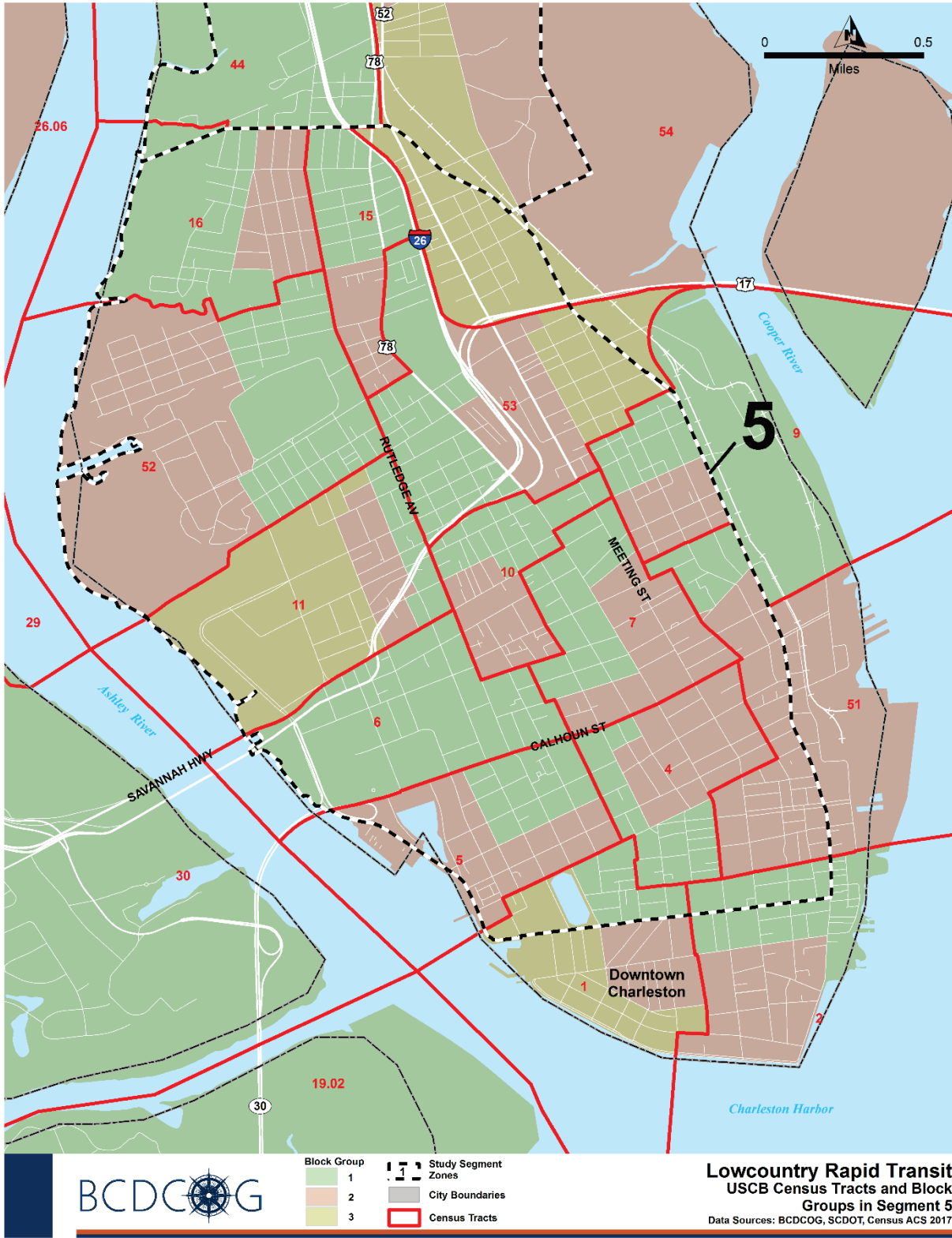


Figure 19 USCB Census Tracts and Block Groups in Segment 5

Population Trends

Population data for Segment 5 and the 31 Segment 5 block groups are provided in Table 44 based on the 2010 Census and the 2017 ACS. Between 2010 and 2017, the human population increased somewhat across Segment 5 and in a majority of associated block groups. Some portions of Segment 5 increased at rates higher than the study area in its entirety (8.7 percent), while 10 Segment 5 block groups experienced population declines in this period. While not shown on Table 44, population density in Segment 5 was higher than the study area as a whole, and the population of Segment 5 composed 31.0 percent of the overall study area population.

Table 44 Segment 5 Population Trends

Geography	2010 Census population	2017 ACS population	% Change (2010-2017)
Segment 5	25,781	26,445	2.6
CT 1 BG 1	897	970	8.1
CT 1 BG 3	118	81	-31.9
CT 2 BG 1	69	82	19.5
CT 4 BG 1	1532	1311	-14.4
CT 4 BG 2	1829	1917	4.8
CT 5 BG 1	916	655	-28.5
CT 5 BG 2	536	637	18.9
CT 6 BG 1	1075	1093	1.7
CT 7 BG 1	1695	1855	9.4
CT 7 BG 2	1809	1209	-33.2
CT 9 BG 1	38	32	-15.7
CT 9 BG 2	909	977	7.5
CT 10 BG 1	922	977	6.0
CT 10 BG 2	1327	1411	6.3
CT 11 BG 1	695	776	11.7
CT 11 BG 2	619	605	-2.3
CT 11 BG 3	923	884	-4.3
CT 15 BG 1	933	1115	19.5
CT 15 BG 2	438	463	5.7
CT 16 BG 1	388	519	34.0
CT 16 BG 2	712	895	25.7
CT 44 BG 1	0	0	-1.3
CT 51 BG 1	575	629	9.4
CT 51 BG 2	227	238	4.5
CT 52 BG 1	1094	1228	12.2
CT 52 BG 2	2023	2539	25.5

Geography	2010 Census population	2017 ACS population	% Change (2010-2017)
CT 53 BG 1	1756	1538	-12.4
CT 53 BG 2	705	785	11.3
CT 53 BG 3	732	675	-7.9
CT 54 BG 2	0	0	—
CT 54 BG 3	288	351	21.5

Sources: 2010 Census, 2017 ACS
— indicates no data

Housing and Other Demographic Factors

Table 45 shows other demographic factors in Segment 5, according to the 2017 ACS. Populations in Segment 5 are considered 100 percent urban. The median ages across Segment 5 and in a majority of associated block groups were lower than the median age across the study area (32.2). Racial and ethnic diversity across Segment 5 and in most Segment 5 block groups was less than the study area as a whole, where 51.7 percent of people identified as “White alone.” Nine Segment 5 block groups had greater diversity than the study area. Similar to the study area, the highest educational attainment of most people 25 years old and older was a high school diploma or equivalency, and of the people who completed an associate’s degree or higher, more obtained a bachelor’s degree than other degrees.

Table 45 Other Segment 5 Demographic Features

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor’s degree
Segment 5	100.0	28.5 ¹	59.4	10.6	15.7
CT 1 BG 1	100.0	24.3	—	0.0	41.2
CT 1 BG 3	100.0	34.7	90.1	8.5	46.8
CT 2 BG 1	100.0	58.7	93.7	9.1	38.1
CT 4 BG 1	100.0	22.5	68.6	20.0	27.9
CT 4 BG 2	100.0	20.2	80.8	8.7	31.7
CT 5 BG 1	100.0	24.7	85.6	3.8	37.0
CT 5 BG 2	100.0	27.9	99.4	0.8	48.7
CT 6 BG 1	100.0	25.3	82.6	7.3	49.3
CT 7 BG 1	100.0	22.6	62.7	30.1	28.4
CT 7 BG 2	100.0	19.8	83.0	8.2	31.4
CT 9 BG 1	100.0	28.5	65.4	13.9	33.1
CT 9 BG 2	100.0	26.8	27.8	27.6	24.4
CT 10 BG 1	100.0	28.9	65.3	20.3	33.0
CT 10 BG 2	100.0	24.0	71.4	29.6	28.6
CT 11 BG 1	100.0	29.8	58.0	14.3	39.3

Geography	% Urban population, 2010 Census	Median age	% White alone	% Highest educ. attainment., High School or GED	% Highest educ. attainment., bachelor's degree
CT 11 BG 2	100.0	26.7	53.2	17.9	27.9
CT 11 BG 3	100.0	22.3	18.7	27.4	9.1
CT 15 BG 1	100.0	38.3	33.3	19.3	30.1
CT 15 BG 2	100.0	28.6	63.3	31.8	40.7
CT 16 BG 1	100.0	38.3	71.3	12.0	36.7
CT 16 BG 2	100.0	30.2	60.0	16.2	42.5
CT 44 BG 1	100.0	42.7	32.5	27.4	13.7
CT 51 BG 1	100.0	25.8	49.1	22.6	29.9
CT 51 BG 2	100.0	48.0	94.4	3.6	46.7
CT 52 BG 1	100.0	43.6	61.3	16.1	31.6
CT 52 BG 2	100.0	21.0	81.8	13.7	36.7
CT 53 BG 1	100.0	38.3	36.7	31.7	14.9
CT 53 BG 2	100.0	45.4	34.3	41.5	10.4
CT 53 BG 3	100.0	29.2	5.9	42.4	4.4
CT 54 BG 2	100.0	14.7	—	31.8	0.0
CT 54 BG 3	100.0	30.0	47.0	40.9	19.1

Sources: 2010 Census, 2017 ACS

— indicates no data

¹ A median factored from a set of medians

Table 46 presents housing characteristics for Segment 5 and its associated block groups, according to the 2017 ACS. The total number of housing units in Segment 5 accounted for 32.0 percent of all housing units in the study area (35,592). Overall, across Segment 5 and in most of its associated block groups, a higher percentage of housing units were vacant than the study area as a whole (13.6 percent). Median home values and rents in Segment 5 and most associated block groups were higher than the study area medians of \$172,250 and \$982, respectively.

Table 46 Segment 5 Housing Characteristics

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
Segment 5	11,374	20.4	36.8	\$450,950 ¹	\$1,274 ¹
CT 1 BG 1	528	21.2	27.4	\$490,900	\$2,075
CT 1 BG 3	41	21.8	67.4	\$970,700	\$1,833
CT 2 BG 1	50	25.2	76.0	\$1,697,000	—
CT 4 BG 1	676	20.1	13.1	\$611,600	\$630
CT 4 BG 2	675	44.6	37.7	\$621,800	\$1,274

Geography	Total housing units	% Vacant	% Owner occupied	Median house value, owner-occupied	Median gross rent
CT 5 BG 1	317	3.8	44.6	\$693,200	\$1,336
CT 5 BG 2	338	19.3	44.8	\$646,400	\$1,370
CT 6 BG 1	622	23.5	35.3	\$441,000	\$1,481
CT 7 BG 1	719	33.1	22.9	\$460,900	\$1,515
CT 7 BG 2	337	17.5	6.8	—	\$1,305
CT 9 BG 1	22	28.5	17.3	\$275,000	\$1,214
CT 9 BG 2	386	9.6	31.2	\$254,200	\$1,172
CT 10 BG 1	483	20.7	32.9	\$428,600	\$1,250
CT 10 BG 2	564	18.1	14.9	\$543,000	\$1,408
CT 11 BG 1	423	16.8	48.0	\$390,700	\$1,168
CT 11 BG 2	342	26.6	56.6	\$235,700	\$1,266
CT 11 BG 3	368	11.6	18.8	\$507,400	\$503
CT 15 BG 1	502	16.9	66.7	\$286,800	\$882
CT 15 BG 2	244	16.4	37.7	\$236,500	\$1,164
CT 16 BG 1	212	5.2	86.3	\$512,800	\$1,779
CT 16 BG 2	368	6.8	53.9	\$312,900	\$1,464
CT 44 BG 1	0	8.2	39.6	\$163,900	\$397
CT 51 BG 1	320	23.1	17.9	\$815,200	—
CT 51 BG 2	177	28.3	58.3	\$826,400	\$1,690
CT 52 BG 1	583	15.4	72.4	\$466,400	\$1,638
CT 52 BG 2	313	7.3	46.4	\$335,000	\$1,487
CT 53 BG 1	771	18.0	42.4	\$261,100	\$914
CT 53 BG 2	490	33.9	17.6	\$219,800	\$539
CT 53 BG 3	362	14.8	7.8	—	\$462
CT 54 BG 2	0	3.9	0.0	—	\$329
CT 54 BG 3	143	19.5	44.5	\$263,200	\$1,366

Source: 2017 ACS

— indicates no data

¹ A median factored from a set of medians

Economic Factors

Table 47 provides 2017 ACS estimates for several economic factors in the 16 census tracts overlapped by Segment 5. The civilian labor force in Segment 5 accounted for 28.2 percent of the total civilian workforce population of the study area (41,779). The unemployment rates for Segment 5 and seven associated census tracts were lower than the study area as a whole (7.0 percent).

Median household income rates across Segment 5 and in nine associated census tracts were lower than the study area as a whole (\$43,125). However, Segment 5 as a whole and 10 of its 16 associated census tracts had lower poverty rates for people in families than the study area (19.7 percent).

Table 47 Segment 5 Economic Factors

Geography	Civilian labor force population	Unemployment rate	Median household income	Poverty rate, people in families
Segment 5 ¹	11,781	6.8 ¹	\$39,985 ²	18.9 ³
CT 1	240	6.5	\$109,222	12.7
CT 2	28	0.0	\$140,357	1.8
CT 4	1087	7.9	\$21,173	38.0
CT 5	678	4.1	\$54,306	1.8
CT 6	577	4.9	\$31,250	12.8
CT 7	1614	5.2	\$29,107	0.0
CT 9	126	8.8	\$36,563	30.4
CT 10	1500	7.2	\$42,026	15.8
CT 11	1009	10.7	\$37,943	47.9
CT 15	997	7.3	\$55,982	10.5
CT 16	827	1.4	\$76,250	4.5
CT 44	0	8.3	\$22,888	33.4
CT 51	259	7.6	\$69,688	8.9
CT 52	1335	0.6	\$74,688	1.0
CT 53	1455	14.0	\$21,116	26.3
CT 54	48	24.7	\$21,746	57.1

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² A median factored from a set of medians

³ An average of rates reported for census tracts

3.6.3 Environmental Justice and Language Use

USCB block group- or census tract-level data are provided in this section to characterize EJ and LEP factors in Segment 5. Data for the entirety of Segment 5 are presented to give context to the individual USCB geographies that make up the segment. Segment 5 data are compared with the study area characteristics given above.

Minority Populations

Table 48 presents the 2017 ACS minority population percentages for Segment 5, as well as the portions of the overall population that identified as races and ethnicities other than the USCB one-race category “White alone.” Segment 5 as a whole had a minority population percentage that was slightly lower than the study area, where 48.3 percent of the population identified as a minority. In 10 associated block groups, those identifying as minorities exceeded the 50-percent

threshold noted as significant in EJ guidance (see emboldened geographies in Table 48). Like the study area, the prominent minority race or ethnicity across Segment 5 was Black or African American, and Hispanic populations ranked as the second most numerous.

Table 48 Segment 5 Minority Populations

Geography	% Minority population	% Af. Am.	% Am. Indian / AK Native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
Segment 5	48.2	44.8	0.3	0.6	0.1	0.8	1.7	3.2
CT 1 BG 1	—	—	—	—	—	—	—	4.3
CT 1 BG 3	9.9	4.0	0.0	1.7	0.0	0.0	4.2	2.4
CT 2 BG 1	6.3	4.0	0.0	2.3	0.0	0.0	0.0	0.9
CT 4 BG 1	31.4	29.7	0.0	1.3	0.0	0.0	0.5	1.4
CT 4 BG 2	19.2	10.8	0.4	1.6	0.2	0.2	6.2	1.7
CT 5 BG 1	14.4	10.8	0.0	3.5	0.0	0.0	0.0	5.6
CT 5 BG 2	0.6	0.0	0.6	0.0	0.0	0.0	0.0	2.4
CT 6 BG 1	17.4	7.9	0.0	6.2	0.0	0.0	3.3	2.4
CT 7 BG 1	37.3	31.5	0.0	2.9	0.0	0.9	2.1	1.8
CT 7 BG 2	17.0	11.1	0.0	1.1	0.0	0.0	4.8	1.3
CT 9 BG 1	34.6	32.5	0.0	0.0	0.0	2.1	0.0	5.9
CT 9 BG 2	72.2	70.8	0.0	1.3	0.0	0.0	0.0	2.1
CT 10 BG 1	34.7	31.3	0.0	1.1	0.0	0.6	1.6	1.7
CT 10 BG 2	28.6	24.0	0.6	1.7	0.0	0.0	2.3	0.0
CT 11 BG 1	42.0	40.7	0.0	0.0	0.0	0.0	1.3	1.4
CT 11 BG 2	46.8	45.0	0.0	1.8	0.0	0.0	0.0	1.7
CT 11 BG 3	81.3	80.3	0.0	0.4	0.0	0.5	0.0	0.0
CT 15 BG 1	66.7	63.9	0.7	0.0	0.0	0.0	2.1	1.8
CT 15 BG 2	36.7	33.3	1.1	0.0	0.0	0.0	2.4	6.9
CT 16 BG 1	28.7	23.1	0.0	0.0	0.0	0.0	5.5	1.8
CT 16 BG 2	40.0	35.9	0.4	1.0	0.0	1.0	1.7	6.7
CT 44 BG 1	67.5	67.5	0.0	0.0	0.0	0.0	0.0	3.8
CT 51 BG 1	50.9	42.1	0.0	0.0	0.0	5.9	2.9	11.9
CT 51 BG 2	5.6	4.2	0.8	0.7	0.0	0.0	0.0	0.7
CT 52 BG 1	38.7	37.5	0.0	0.0	0.0	1.1	0.0	0.4
CT 52 BG 2	18.2	12.0	0.6	2.2	0.0	0.0	3.3	5.2
CT 53 BG 1	63.3	61.1	0.0	0.0	0.0	1.3	0.9	0.9
CT 53 BG 2	65.7	62.9	0.0	0.0	0.8	1.3	0.8	3.1
CT 53 BG 3	94.1	94.1	0.0	0.0	0.0	0.0	0.0	0.0

Geography	% Minority population	% Af. Am.	% Am. Indian / AK Native	% Asian	% Native Hawaiian / other Pacific Islander	% Some other race	% Two or more races	% Hispanic
CT 54 BG 2	99.6	98.9	0.7	0.0	0.0	0.0	0.0	0.0
CT 54 BG 3	53.0	53.0	0.0	0.0	0.0	0.0	0.0	2.5

Source: 2017 ACS

— indicates no data

Af. Am. = Black or African American; Am. Indian / AK Native = American Indian and Alaska Native

Note: EJ populations are emboldened

Low-Income Populations

Table 49 provides per capita income and poverty rates for Segment 5 and the 16 census tracts overlapped by Segment 5, based on the 2017 ACS. As shown, per capita income rates in Segment 5 and in half its associated census tracts were lower than in the study area, where \$25,824 was the average per capita income. However, none of the Segment 4 census tracts had per capita income rates at or lower than the 2017 poverty threshold (\$12,752).

Across Segment 5 and in all but three associated census tract (see emboldened geographies in Table 49), poverty rates figured for all people were higher than the official U.S. poverty rate (12.3 percent). The rates in 10 of these block groups were also higher than the study area average poverty rate of 23.7 percent.

Table 49 Segment 5 Low-Income Populations

Geography	Per capita income	Poverty rate, all people
Segment 5¹	\$36,800 ²	31.5 ²
CT 1	\$65,947	14.7
CT 2	\$134,793	5.4
CT 4	\$21,852	59.0
CT 5	\$43,062	32.3
CT 6	\$30,262	44.6
CT 7	\$18,572	47.7
CT 9	\$21,797	38.2
CT 10	\$27,317	43.5
CT 11	\$24,338	46.3
CT 15	\$28,350	14.6
CT 16	\$43,597	6.5
CT 44	\$14,849	36.1
CT 51	\$53,287	22.3
CT 52	\$22,953	5.4
CT 53	\$17,934	33.8
CT 54	\$19,896	53.1

Source: 2017 ACS

¹ Segment totals for these variables are calculated from census tract data due to availability

² An average of data reported for census tracts

Note: EJ populations are emboldened

Limited English Proficiency Populations

LEP populations and their associated portions of the total population 5 years old and older in Segment 5 are shown in Table 50, as reported in the 2017 ACS. While no Segment 5 LEP population meets the DOJ LEP threshold, Spanish-speaking LEP populations make up the majority of the overall Segment 5 LEP population.

Table 50 Segment 5 Limited English Proficiency Populations

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
Segment 5	133	0.5	37	0.1	36	0.1	0	0.0
CT 1 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 1 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 2 BG 1	0	0.0	1	0.0	2	0.0	0	0.0
CT 4 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 4 BG 2	0	0.0	8	0.0	5	0.0	0	0.0
CT 5 BG 1	37	0.0	0	0.0	0	0.0	0	0.0
CT 5 BG 2	0	0.0	5	0.0	0	0.0	0	0.0
CT 6 BG 1	0	0.0	8	0.0	22	0.0	0	0.0
CT 7 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 7 BG 2	0	0.0	7	0.0	0	0.0	0	0.0
CT 9 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 9 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 10 BG 1	6	0.0	0	0.0	0	0.0	0	0.0
CT 10 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 11 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 11 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 11 BG 3	0	0.0	0	0.0	0	0.0	0	0.0
CT 15 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 15 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 16 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 16 BG 2	9	0.0	0	0.0	0	0.0	0	0.0
CT 44 BG 1	0	0.0	0	0.0	0	0.0	0	0.0
CT 51 BG 1	52	0.1	0	0.0	7	0.0	0	0.0
CT 51 BG 2	0	0.0	4	0.0	0	0.0	0	0.0
CT 52 BG 1	9	0.0	5	0.0	0	0.0	0	0.0

Geography	Spanish		Other Indo-European		Asian / Pacific Islander		Other languages	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
CT 52 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 53 BG 1	5	0.0	0	0.0	0	0.0	0	0.0
CT 53 BG 2	10	0.0	0	0.0	0	0.0	0	0.0
CT 53 BG 3	5	0.0	0	0.0	0	0.0	0	0.0
CT 54 BG 2	0	0.0	0	0.0	0	0.0	0	0.0
CT 54 BG 3	0	0.0	0	0.0	0	0.0	0	0.0

Source: 2017 ACS

Note: LEP populations are emboldened

4 Study Area Trends and Next Steps

Table 51 presents study area and segment socioeconomic trends among the human population that would be affected by the Project. According to the 2017 ACS, the study area population is largely concentrated in Segments 2, 3, and 5. A comparison of data from the 2010 Census and the 2017 ACS shows that populations in Segments 2, 3, and 4 have grown the most in the past decade. Overall, based on the 2017 ACS, people in Segments 3 and 5 were younger. Median house values were substantially higher in Segment 5 than in other portions of the study area, while rents were lower in Segments 3 and 4. Minorities have tended to concentrate in Segment 4 and, to a lesser extent, in Segment 3. Poverty rates were higher in Segments 3, 4, and 5 than elsewhere in the study area, and unemployment rates were higher in Segment 4. Segment 3 was home to a Spanish-speaking LEP population with totals meeting the DOJ LEP threshold.

Table 51 Study Area and Segment Trends

Geography	% of study area pop.	% pop. change, 2010 to 2017	People per square mile	Median age	% of study area housing units	Median house value	Median gross rent	% of study area work-force	Unemployment rate	% minority	Poverty rate, all people	Spanish LEP	
												Pop.	%
Study Area	—	8.7	2,239	32.2	—	\$172,250	\$982	—	7.0	48.3	23.7	2,383	3.0
Segment 1	9.2	6.9	853	36.2	8.5	\$192,250	\$1,121	8.4	6.8	42.2	11.7	109	1.5
Segment 2	26.3	15.4	2642	36.3	24.3	\$164,150	\$1,040	29.0	6.2	40.1	13.9	392	1.9
Segment 3	27.6	10.3	1,828	32.2	29.1	\$111,150	\$882	29.9	7.4	58.9	27.3	1,731	8.0
Segment 4	5.9	10.5	1,220	36.4	6.1	\$101,150	\$838	4.5	11.4	85.4	35.0	18	0.4
Segment 5	31.0	2.6	7,556	28.5	32.0	\$450,950	\$1,274	28.2	6.8	40.6	31.5	133	0.5

4.1 Environmental Justice Populations

Generally, EJ populations are prominent in the study area and associated region. As discussed in Section 2, Regional Context, the City of Charleston, Town of Lincolnton, and the City of North Charleston all qualified as low-income populations based on the 2017 ACS, and Lincolnton and North Charleston additionally qualified as minority populations. Berkeley and Charleston counties in their entireties also qualified as low-income. However, in assessing EJ in the CCR study area, study area segments and USCB geographies were considered due to representing detailed patterns particular to the study area.

Table 52 presents the two segments (Segment 3 and 4) and 39 individual USCB block groups that had EJ-qualifying minority percentages. While not all had particular races or ethnicities that individually qualified, all of these portions of the study area had overall minority percentages that exceeded the 50 percent threshold noted as significant in EJ guidance. Across the study area, the prominent minority race or ethnicity was Black or African American, and Hispanic populations ranked as the second most numerous. Notably, Segments 3 and 4 qualified as minority populations, and the populations of these two EJ-qualifying segments represented nearly 34 percent of the study area population. Figure 20 shows minority populations at the block group level across the CCR study area.

Table 52 Study area Portions Qualifying as Minority Populations

Geography	% Minority	% African American, the only qualifying minority across the study area
Segment 3	58.9	53.6
Segment 4	85.4	82.5
CT 9 BG 2	72.2	70.8
CT 11 BG 3	81.3	80.3
CT 15 BG 1	66.7	63.9
CT 31.04 BG 2	62.5	50.3
CT 31.05 BG 1	58.1	54.1
CT 31.06 BG 3	58.2	43.7
CT 31.07 BG 3	56.0	48.0
CT 31.11 BG 1	68.8	64.5
CT 31.15 BG 3	62.9	57.0
CT 33 BG 1	58.8	58.8
CT 33 BG 2	64.9	64.9
CT 33 BG 3	56.9	56.9
CT 33 BG 4	94.3	84.6
CT 34 BG 3	74.3	61.6
CT 37 BG 1	71.7	68.3
CT 37 BG 2	93.4	92.0

Geography	% Minority	% African American, the only qualifying minority across the study area
CT 37 BG 3	81.7	81.7
CT 38 BG 1	90.0	88.4
CT 38 BG 2	93.3	93.3
CT 40 BG 1	88.0	86.8
CT 40 BG 2	96.0	96.0
CT 40 BG 3	92.1	86.3
CT 43 BG 1	72.3	72.3
CT 43 BG 2	91.3	91.3
CT 43 BG 3	92.4	80.8
CT 43 BG 4	84.7	82.3
CT 44 BG 1	67.5	67.5
CT 44 BG 2	87.1	86.2
CT 51 BG 1	50.9	42.1
CT 53 BG 1	63.3	61.1
CT 53 BG 2	65.7	62.9
CT 53 BG 3	94.1	94.1
CT 54 BG 1	100.0	100.0
CT 54 BG 2	99.6	98.9
CT 54 BG 3	53.0	53.0
CT 55 BG 1	81.7	80.7
CT 55 BG 2	69.3	66.7
CT 107 BG 1	66.0	59.6
CT 107 BG 2	53.7	52.3

Source: 2017 ACS

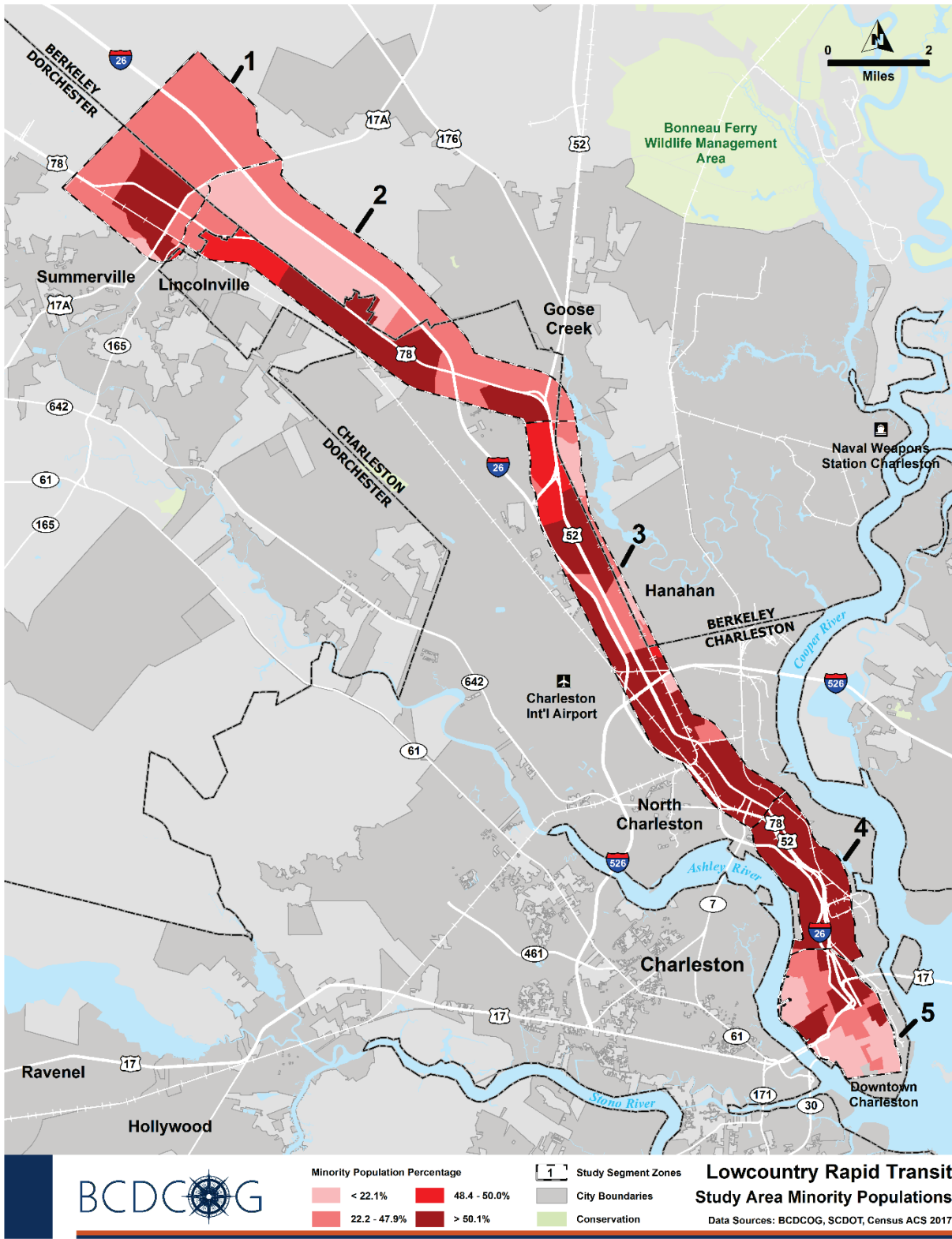


Figure 20 Study Area Minority Populations

While no census tracts in the study area had per capita income rates at or lower than the 2017 U.S. poverty threshold of \$12,752, Table 53 presents the three segments (Segment 3, 4, and 5) and the 37 individual USCB census tracts that had poverty rates higher than the official U.S. poverty rate of 12.3 percent. Those portions of the CCR study area with low-income populations that exceeded the study area poverty rate of 23.7 percent and had per capita income rates lower than the study area average of \$25,824 are emboldened in Table 53 due to their potential higher vulnerability. Notably, Segments 3, 4, and 5 qualified as low-income populations, and the populations of these three EJ-qualifying segments represented nearly 65 percent of the study area population. Figure 21 shows low-income populations at the census tract level across the CCR study area.

Table 53 Study Area Portions Qualifying as Low-Income Populations

Geography	Poverty rate	Poverty rate higher than study area	Per capita income lower than study area
Segment 3	27.3	Y	Y
Segment 4	35.0	Y	Y
Segment 5	31.5	Y	
CT 1	41.7	Y	
CT 4	59.0	Y	Y
CT 5	32.3	Y	
CT 6	44.6	Y	
CT 7	47.7	Y	Y
CT 9	38.2	Y	Y
CT 10	43.5	Y	
CT 11	46.3	Y	Y
CT 15	14.6		
CT 31.04	42.6	Y	Y
CT 31.05	40.7	Y	Y
CT 31.06	18.4		Y
CT 31.07	19.4		Y
CT 31.11	20.4		Y
CT 31.14	16.2		
CT 31.15	27.6	Y	Y
CT 33	33.0	Y	Y
CT 34	44.8	Y	Y
CT 36	20.2		
CT 37	33.6	Y	Y

Geography	Poverty rate	Poverty rate higher than study area	Per capita income lower than study area
CT 38	39.6	Y	Y
CT 40	28.3	Y	Y
CT 43	42.6	Y	Y
CT 44	36.1	Y	Y
CT 51	22.3		
CT 53	33.8	Y	Y
CT 54	53.1	Y	Y
CT 55	36.9	Y	Y
CT 106.03	14.9		Y
CT 106.04	15.2		Y
CT 107	22.3		
CT 207.15	16.6		Y
CT 207.17	17.0		Y
CT 208.09	13.1		
CT 208.10	21.0		Y
CT 209.01	27.3	Y	Y
CT 210	20.8		Y

Source: 2017 ACS

Y = Yes

Note: Low-income populations exceeding study area totals are emboldened

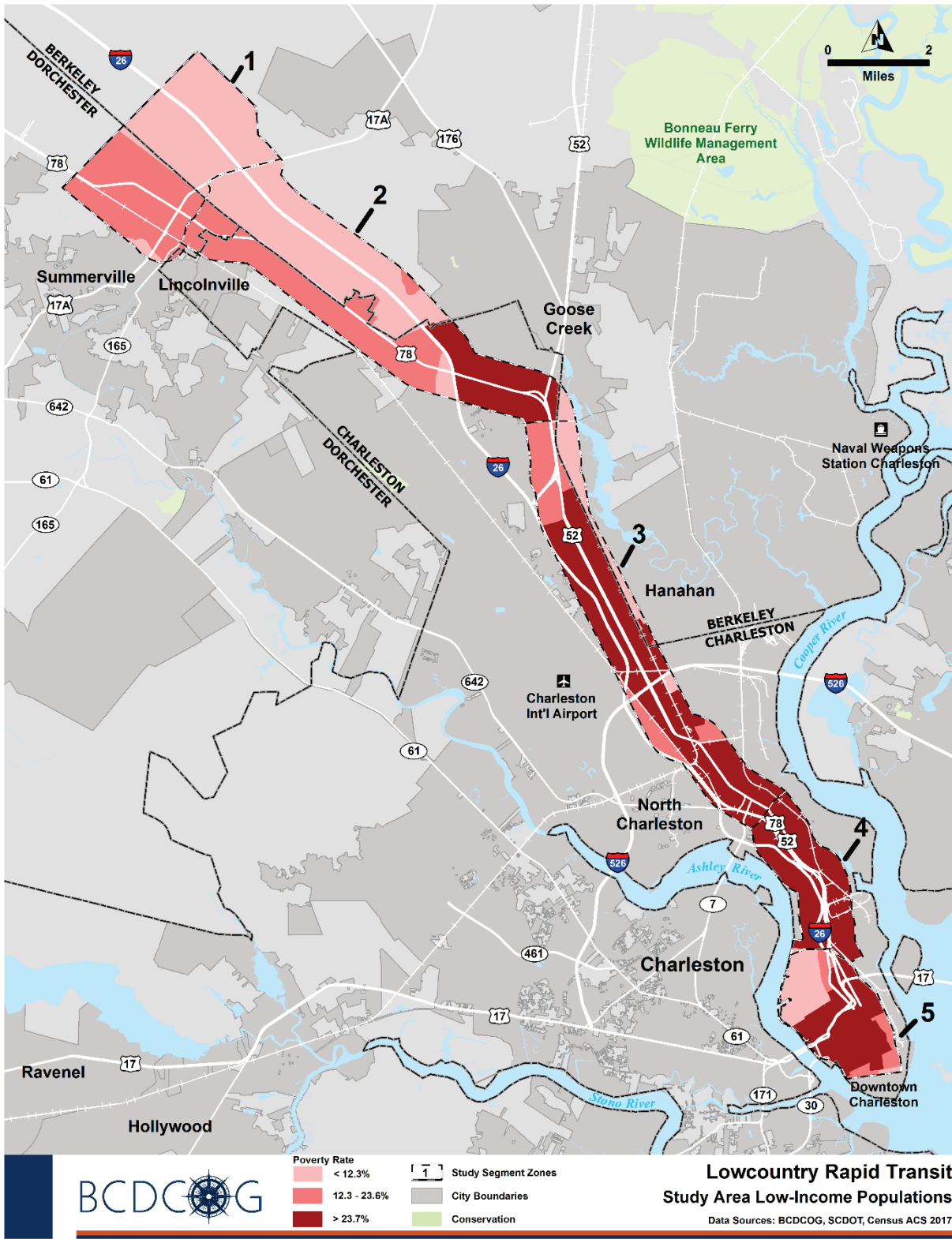


Figure 21 Study Area Low-Income Populations

4.2 Next Steps

As the community characterization study proceeds, HDR may refine the CCR study area to consist of the natural community divisions that have developed over time through shared cultural histories, ethnicities, economic strategies, and central concerns or interests of community participants. Entire settlements, such as whole ethnic communities or neighborhoods, will be delineated wherever possible to account for changes in community cohesion that may result from the LCRT.

Following CIA Guidance, HDR will seek to characterize any transient populations in the CCR study area and any other groups of people who share common characteristics or interests that nurture a sense of unity among the group that are not spatial in nature. Such interests could include religion, culture and ethnicity, class status, shared use of bus or commuter routes, or harvest and consumption of natural resources for personal and family sustenance. HDR will also enhance its consideration of known EJ neighborhoods and may identify additional EJ populations and neighborhoods as the study proceeds. Direct observations, conversations with people who reside in or utilize the study area, and coordination with relevant organizations serving the study area and/or associated populations will help inform CCR refinement. HDR will also make appropriate re-evaluations of the CCR study area and associated human communities based on changes to the set of alternatives being considered.

This report will serve as a baseline for the NEPA process and will be used to develop the CIA, an evaluation of effects of the LCRT on communities and their qualities of life. Like the CCR, the CIA will be developed in part through direct observations, conversations with study area residents and stakeholders, and coordination with relevant organizations serving the study area and/or associated populations. The consideration and documentation of environmental and socioeconomic effects is a critical part of NEPA, and findings from the CCR and CIA will be incorporated into the NEPA document developed for the LCRT.

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