



## Appendix D

# Community Impact Assessment





# COMMUNITY IMPACT ASSESSMENT

INTERSTATE 526 (I-526)

FROM PAUL CANTRELL BOULEVARD TO VIRGINIA AVENUE  
NORTH CHARLESTON AND CHARLESTON, SOUTH CAROLINA

**Version 8, 10/22/20**



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# 1.0 INTRODUCTION

## 1.1 PROJECT DESCRIPTION

In order to meet the Charleston area’s current and future infrastructure needs, the South Carolina Department of Transportation (SCDOT), along with the Federal Highway Administration (FHWA), seeks to increase capacity and improve operations of I-526 Lowcountry Corridor West - one of South Carolina’s most congested highways – from Paul Cantrell Boulevard to the Cooper River.

As the Charleston region (including North Charleston and West Ashley) continues to grow, transportation and infrastructure deficiencies and needs are increasingly apparent. Known for its southern hospitality and unique historic flair, Charleston is a coastal port city that is experiencing an unprecedented population boom that is two times the state average and three times the national average. Ranked #1 for the past seven years for Best US City in the Travel + Leisure magazine’s “World’s Best” awards and #1 on Southern Living Magazine’s “South’s Best Cities” list for 2019, it is unlikely that the growth of the Charleston area will slow any time soon. As this influx of people progresses, traffic congestion will continue to increase, and roads will experience natural degradation from use and age.

### 1.1.1 History and Background

The South Carolina section of I-26 was completed in 1969 and served as the first major interstate to facilitate movement directly in and out of the Charleston and North Charleston peninsula. The construction of I-26, and the addition of I-526 in the late 1980s, resulted in back-to-back neighborhood divisions in North Charleston and served as lost opportunities for community investment. An insufficient amount of opportunities for residents to voice their concerns and a lack of community involvement/mitigation during these projects were contributing factors that helped foster the innate distrust between residents and government that continues to this day<sup>1</sup>. When the I-26 and I-526 transportation projects were constructed, low-income and minority residents felt they were not properly informed or assisted with relocation, and the selected alternative effectively bisected the existing communities<sup>2</sup>. By physically separating these neighborhoods, both interstates negatively impacted community cohesion and created a barrier effect that continues to prevent residents from accessing previously walkable recreational facilities, grocery stores and other community amenities.

### 1.1.2 Project Purpose and Need

The purpose of the project is to increase capacity at the I-26/I-526 interchange and along the I-526 mainline, thereby relieving traffic congestion and improving operations at the I-26/I-526 interchange and along the I-526 mainline from Paul Cantrell Boulevard to Virginia Avenue. SCDOT currently ranks the segment of I-526 between I-26 and Virginia Avenue as the most congested segment of interstate highway in the state. The remainder of the I-526 Lowcountry Corridor WEST project, from I-26 to Paul Cantrell Boulevard, ranks among the top ten of the state’s most congested corridors. Forecasts show that segments of the corridor will continue to be among the state’s most congested in 2040. Due to geometric deficiencies, the interchange of I-526 and I-26 is the major

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<sup>1</sup> Nonko, E. 2019. Trying Not to Repeat History on the East Side of Charleston. Next City. <https://nextcity.org/daily/entry/trying-not-to-repeat-history-on-the-east-side-of-charleston>.

<sup>2</sup> I-526 Lowcountry Corridor Community Advisory Council Meeting No. 4, Meeting Minutes. January 4, 2020.



source of the congestion (refer to DEIS Appendix B for additional information). The provisions of the 2014 South Carolina Multimodal Transportation Plan, Interstate Plan are incorporated by reference in the DEIS.

The I-526/I-26 interchange is listed as the #2 project in the 2035 CHATS LRTP Ranked List of Candidate Transportation Projects, is the #6 project on SCDOT's ACT 114 Interstate Capacity List, and is listed in SCDOT's State Transportation Improvement Plan 2017-2022. Congestion was detailed in SCDOT's Corridor Analysis for I-526 Between North Charleston and West Ashley and in the Interstate Plan portion of SCDOT's 2014 Multimodal Transportation Plan, which lists four segments within this project corridor among the top 20 most congested interstate segments.

The need of this project is derived from the following factors, which are detailed further in Chapter 2 of the DEIS:

- Growth in population and employment
- Decreased mobility and increased traffic congestion
- Existing traffic conditions
- Projected traffic conditions
- Geometric Deficiencies

### 1.1.3 Reasonable Study Alternatives

Improving the existing I-526 LCC WEST mainline from Virginia Avenue to Paul Cantrell Boulevard is proposed to accommodate the current and future vehicular demands, as well as population and employment increases. Improving the existing corridor meets the purpose and need by increasing capacity and thereby reducing congestion. Additional alternatives, including no-build, new location, and transportation system management (TSM), were studied as a part of the alternative analysis but were not considered feasible or prudent. All alternatives studied can be further reviewed in Appendix B and C of the DEIS.

#### 1.1.3.1 I-526/Paul Cantrell Boulevard

This alternative encompasses the interchange at Paul Cantrell Boulevard and I-526, the intersection at Paul Cantrell Boulevard and Magwood Drive, and the widening of I-526 from Paul Cantrell Boulevard to International Boulevard. As an interchange with a separated overpass bridge, this alternative is compatible with the adjacent interchange. The proposed alternative would resolve 15 out of the 16 identified geometric deficiencies as compared to the No-Build Alternative. The proposed alternative would also improve the weighted Volume-to-Capacity ratio and the mainline Level of Service (LOS) as compared to the No-Build. See Figure 1.1 for the proposed design alternative.

#### 1.1.3.2 I-526/I-26 System-to-System Interchange

Improvements to the existing I-526/I-26 Interchange (Alternatives 1, 1A, 2, and 2A) were developed based on separating movements that create congestion caused by closely spaced ramps and less than desirable weave and merge lane lengths. Alternatives 1, 1A, 2, and 2A are the reasonable alternatives that are illustrated below and are further described in Appendix C of the DEIS.

**Alternative 1:** This alternative adds collector-distributor roads to the north and south sides of I-526 through the Rivers Avenue interchange. The eastbound I-526 to westbound I-26 directional ramp will be moved to cross over I-26 north of I-526. Access between Rivers Avenue and I-26 via I-526 is eliminated because the I-526 eastbound to I-26 westbound directional ramp prevents the slip ramp that leads to it. There is insufficient distance to grade separate all the existing movements. Figure 1.2 depicts the proposed improvements for Alternative 1 in greater detail.

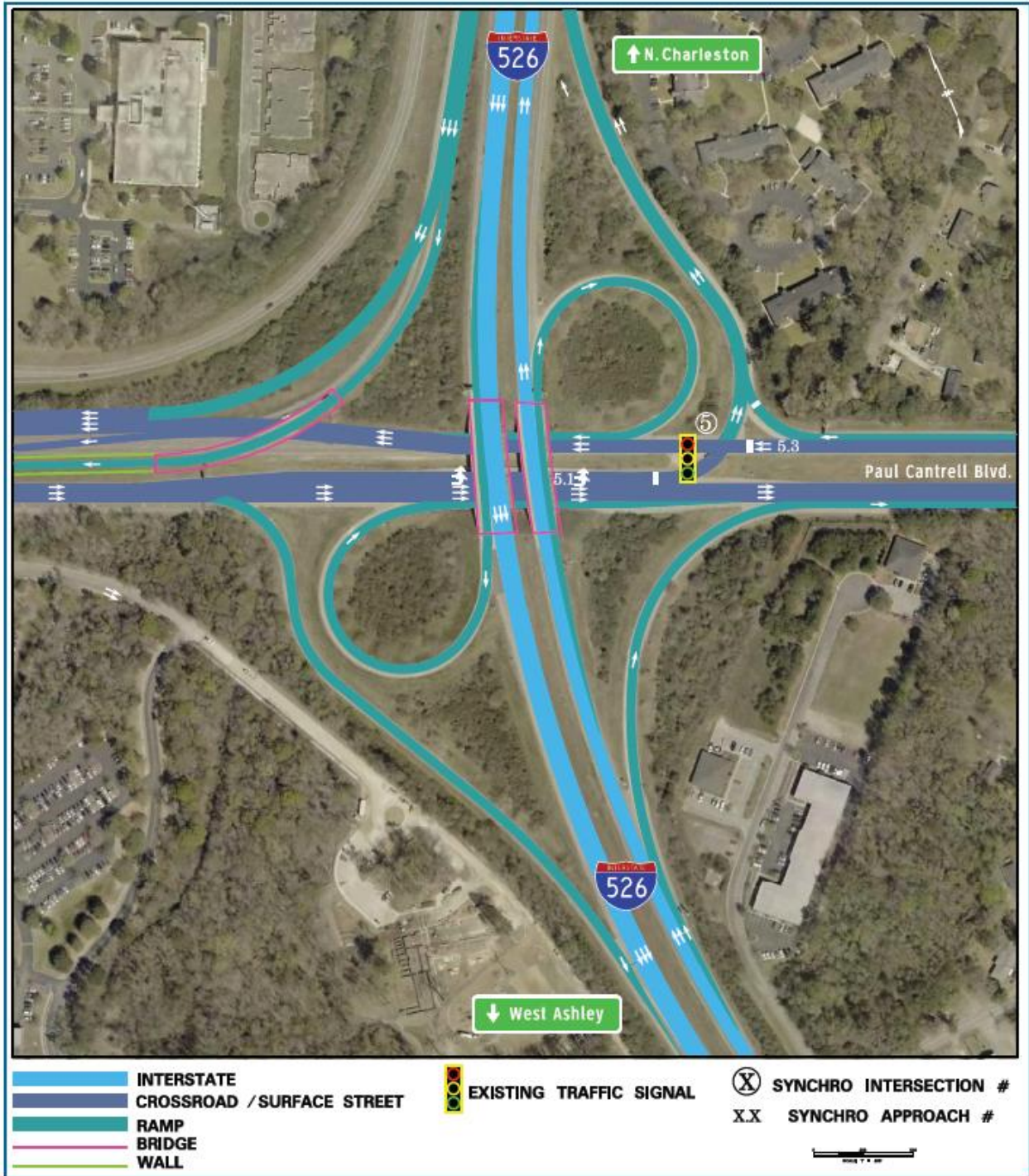


Figure 1.1: Proposed Interchange Configuration at I-526 and Paul Cantrell Boulevard in West Ashley. This alternative also includes widening I-526 to 8-lanes.

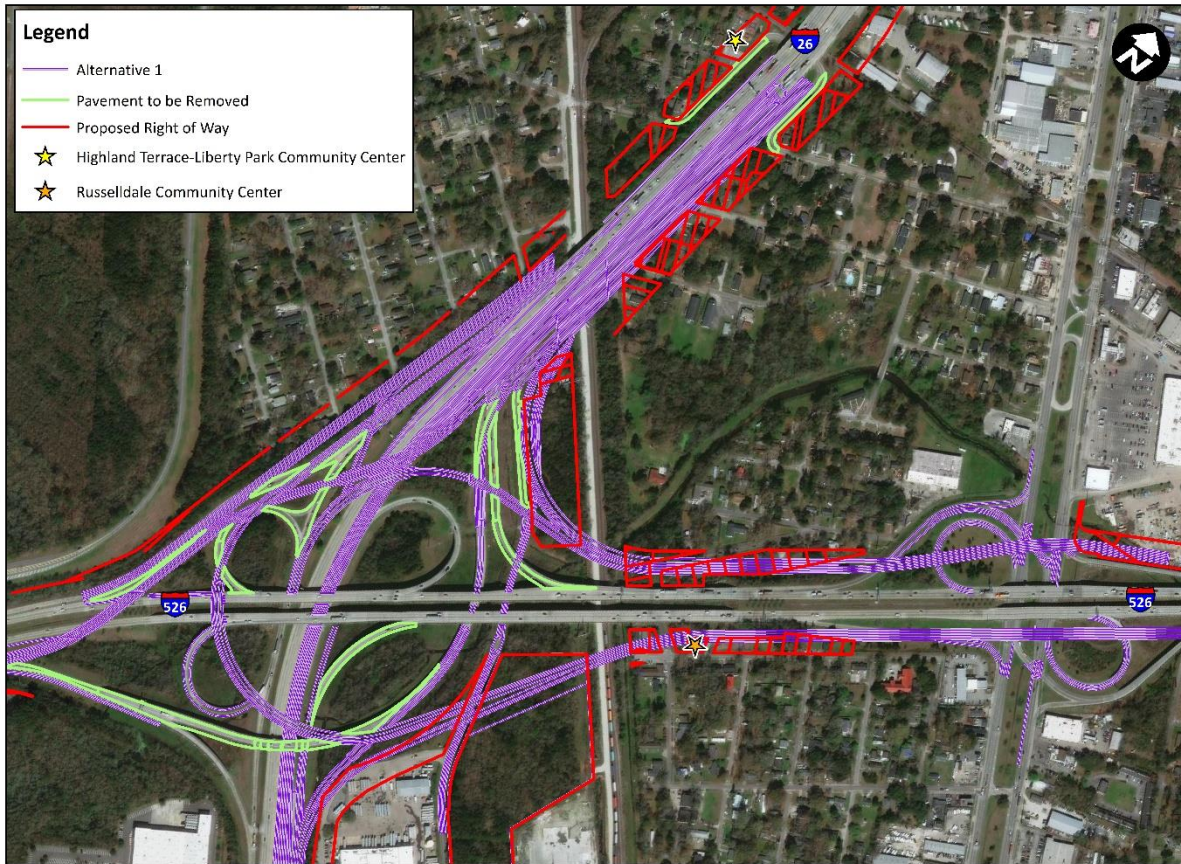


Figure 1.2: Alternative 1 at the 526/26 System Interchange in North Charleston

**Alternative 1A:** This alternative adds collector-distributor roads to the north and south sides of I-526 through the Rivers Avenue interchange. The eastbound I-526 to westbound I-26 directional ramp will be moved to cross over I-26 north of I-526. Access between Rivers Avenue and I-26 via I-526 is maintained. Figure 1.3 depicts the proposed improvements for Alternative 1A in greater detail.

**Alternative 2 (Proposed Preferred):** This alternative adds collector-distributor roads to the north and south sides of I-526 through the Rivers Avenue interchange. Access between Rivers Avenue and I-26 via I-526 is eliminated. This alternative retains the I-26 eastbound to I-526 loop ramp which provides access for traffic entering the eastbound C-D road from Aviation Avenue and Remount Road to reach I-526 eastbound. This loop also serves as a redundant path if there is an incident on the new I-26 eastbound to I-526 eastbound directional ramp and serves to lessen the traffic pressure on Rivers Ave and Remount Road. Figure 1.4 depicts the proposed improvements for Alternative 2 in greater detail.

**Alternative 2A:** This alternative adds collector-distributor roads to the north and south sides of I-526 through the Rivers Avenue interchange. Eastbound I-526 to westbound I-26 will use the existing directional ramp. Access between Rivers Avenue and I-26 via I-526 is maintained. Figure 1.5 depicts the proposed improvements for Alternative 2A in greater detail.

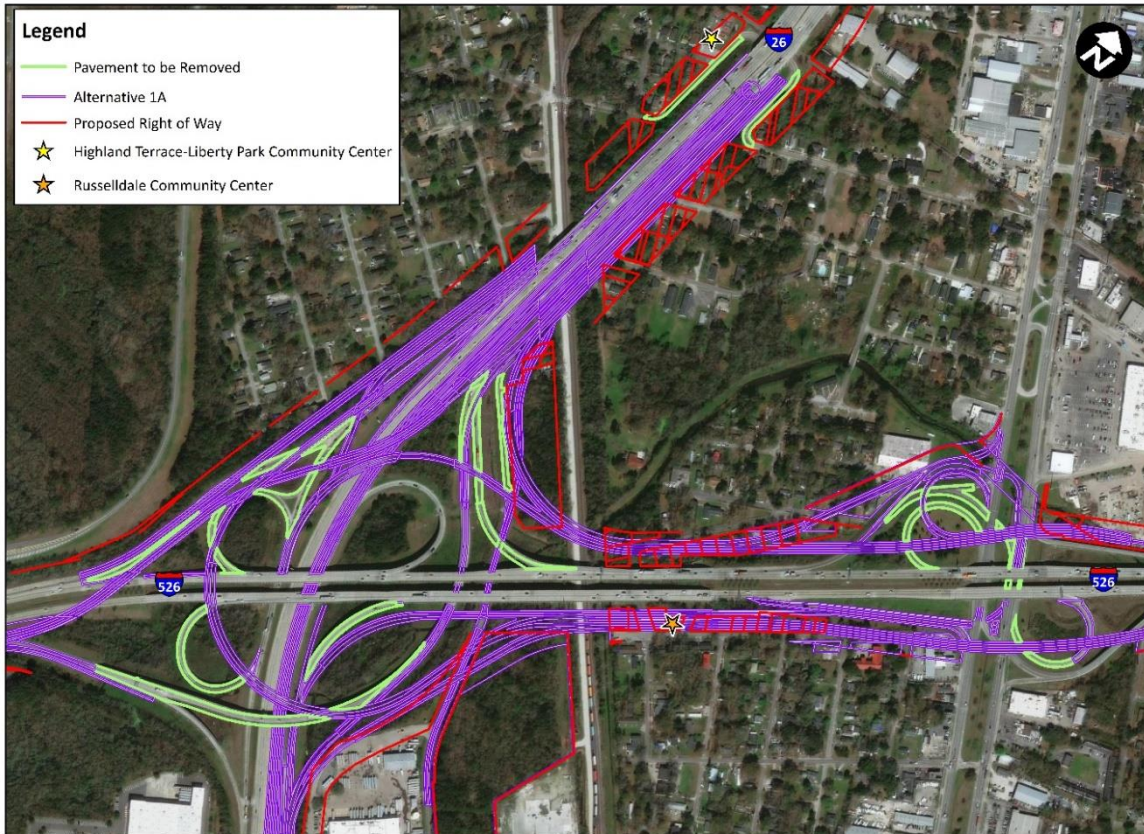


Figure 1.3: Alternative 1A at the 526/26 System Interchange in North Charleston

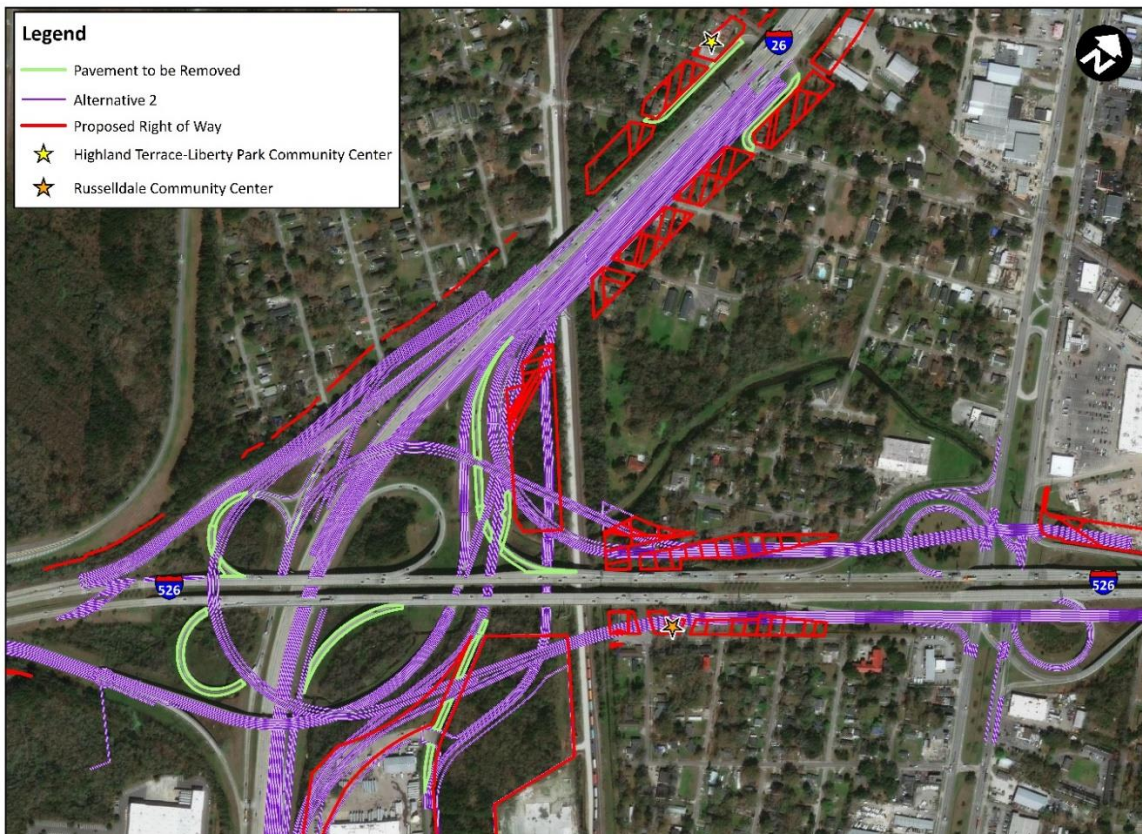


Figure 1.4: Alternative 2 at the 526/26 System Interchange in North Charleston

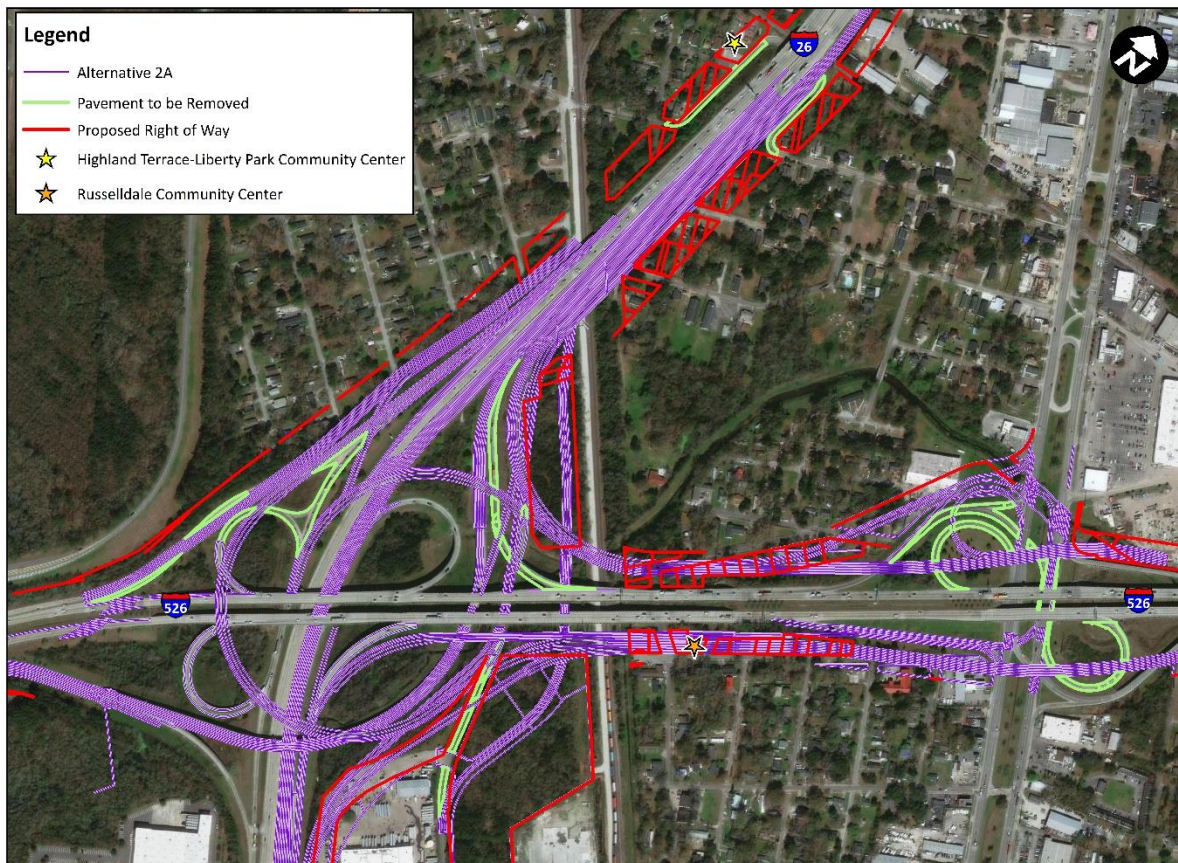


Figure 1.5: Alternative 2A at the 526/26 System Interchange in North Charleston

Alternative 2 is recommended as the preferred alternative between International Boulevard and Rivers Avenue. Although Alternative 1 and 2 would remove access from Rivers Avenue to I-26 via I-526, both alternatives would result in lower relocations and potential impacts to environmental justice populations than Alternative 1A or 2A. Alternative 1 would require a traffic movement or weave that may result in overcapacity and failing LOS in the segment. The over-congestion of this segment in Alternative 1 may cause upstream backups along I-526 eastbound and I-526 westbound. Alternative 2 does not require this traffic movement or weave, which reduces the number of vehicles which must weave compared to Alternative 1. This results in traffic operations which are under capacity and with acceptable LOS C. Alternative 2 is the recommended preferred alternative between International Boulevard and Rivers Avenue.

### 1.1.3.3 I-526 at North Rhett/Virginia Avenue

This alternative incorporates the collector-distributor roads from the I-26/I-526 interchange, allowing westbound traffic from North Rhett Avenue direct access to the I-26 westbound collector distributor. A new exit ramp will be constructed for I-526 westbound traffic bound for Rhett and Virginia, and the existing loop movement will be removed. Westbound traffic from I-526 bound for Virginia Ave will now have direct access to Virginia Avenue via a Texas U-turn style ramp that will be constructed adjacent to North Rhett Avenue; this U-turn ramp will also service traffic departing Virginia Avenue bound for I-526 East. A new entrance ramp will be constructed for I-526 eastbound traffic from North Rhett Avenue and Virginia Avenue, and the existing loop movement will be removed. Eastbound traffic from I-26 Will have the option to exit toward North Rhett Avenue and Virginia Avenue before eastbound I-26 traffic merges eastbound I-526 traffic.



Figure 1.6: Proposed Interchange Configuration at North Rhett and Virginia Avenue in North Charleston

## 1.2 PURPOSE OF THE COMMUNITY IMPACT ASSESSMENT

A Community Impact Assessment (CIA) is an informative document that is used to determine possible cultural, social, economic, historical and physical impacts that a transportation project may have on nearby communities. It provides the project team with a procedure to document and understand possible effects of a project in order to determine quality of life for the nearby communities before, during and after construction. This involves the project team fully comprehending the goals of the local and regional planning groups, understanding the values that are important to the impacted communities, and taking the needs and wants of the citizens into account throughout the entirety of the planning and construction process. Input from the community ultimately helps shape the outcome of the transportation project and helps planners to make socially responsible and efficient decisions. Specific impacts to be evaluated include relocations (residential, community and business), isolation, environmental, accessibility, community cohesion, socio economic, agricultural, recreational and mobility.

Many legal authorities also support the use of a CIA for all federally funded transportation projects. For example, Title VI of the Civil Rights Act of 1964 states that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” A CIA provides the demographic data to determine impacts to low-income and minority populations to help prevent intentional discrimination. The Federal-Aid Highway Act of 1970 (23 USC 109(h)) requires that “final decisions on the project are made in the best overall public interest.” This includes eliminating or minimizing negative impacts such as air, noise, and water pollution, retaining public facilities and services, considering property tax changes and relocations, and fostering a continuation of healthy local and regional community growth. These legislative documents, along with many others, justify the need for a CIA in order to determine impacts for each alternative, avoid and minimize as many impacts as possible, then mitigate where necessary.

North Charleston in particular is experiencing an influx of former City of Charleston residents, likely due to gentrification and the increasingly unaffordable property values in Charleston. This has resulted in varied demographics and a greater need for affordable housing options in North Charleston. Due to the primarily metropolitan and often dense nature of North Charleston, low-income and minority populations need to be thoughtfully considered with respect to many of the transportation projects occurring in the area.

Executive Order 12898 mandates that all Federal agencies “shall make achieving environmental justice 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 minority populations and low-income

populations.” **Environmental Justice (EJ)**, which is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income<sup>3</sup>, assesses impacts to low-income or minority populations (**EJ populations**) to help shape the mitigation for the transportation project. EJ guidelines and impacts are discussed in detail in the project EJ Analysis contained in the DEIS Appendix G.

## 2.0 METHODOLOGY

### 2.1 CIA STUDY AREA

The CIA study area was developed to include all areas that could experience direct, indirect, and/or cumulative effects from the proposed project. The area of potential direct impacts was determined based on the proposed right-of-way for each build alternative. Notable community features along the project corridor and within the immediate vicinity were also identified. Census Block Groups containing neighborhoods likely to be affected by the proposed project were reviewed to determine whether they captured the notable community features within proximity to the project. Many of these boundary lines follow local streets, railroads, and waterways and provide natural boundary lines. As such, the CIA study area is bounded by census Block Groups, creating the boundary shown in Figure 2.1. This CIA references census Block Group data because it is the most current data available from the US Census Bureau. Census data sets include block-level data, however, this data is 10 years old and may not represent current population and demographic trends. Using census block group data helps better identify special populations and provides a more accurate reflection of the demographics of residents along the project corridor. Block Group data was verified by conducting field surveys and reviewing aerial mapping of the CIA study area to identify the exact geographic location of special populations within each Block Group.

Block Groups within the CIA study area in North Charleston include 450190033002, 450190033003, 450190033001, 450190035001, 450190031052, 450190039002, 450190034003, 450190035002, 450190034004, 450190033004, 450190031112, 450190031111, 450190031113, 450190031114, 450190039001, 450190038003, 450190038001, 450190038002, 450190031051 and 450190035003.

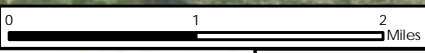
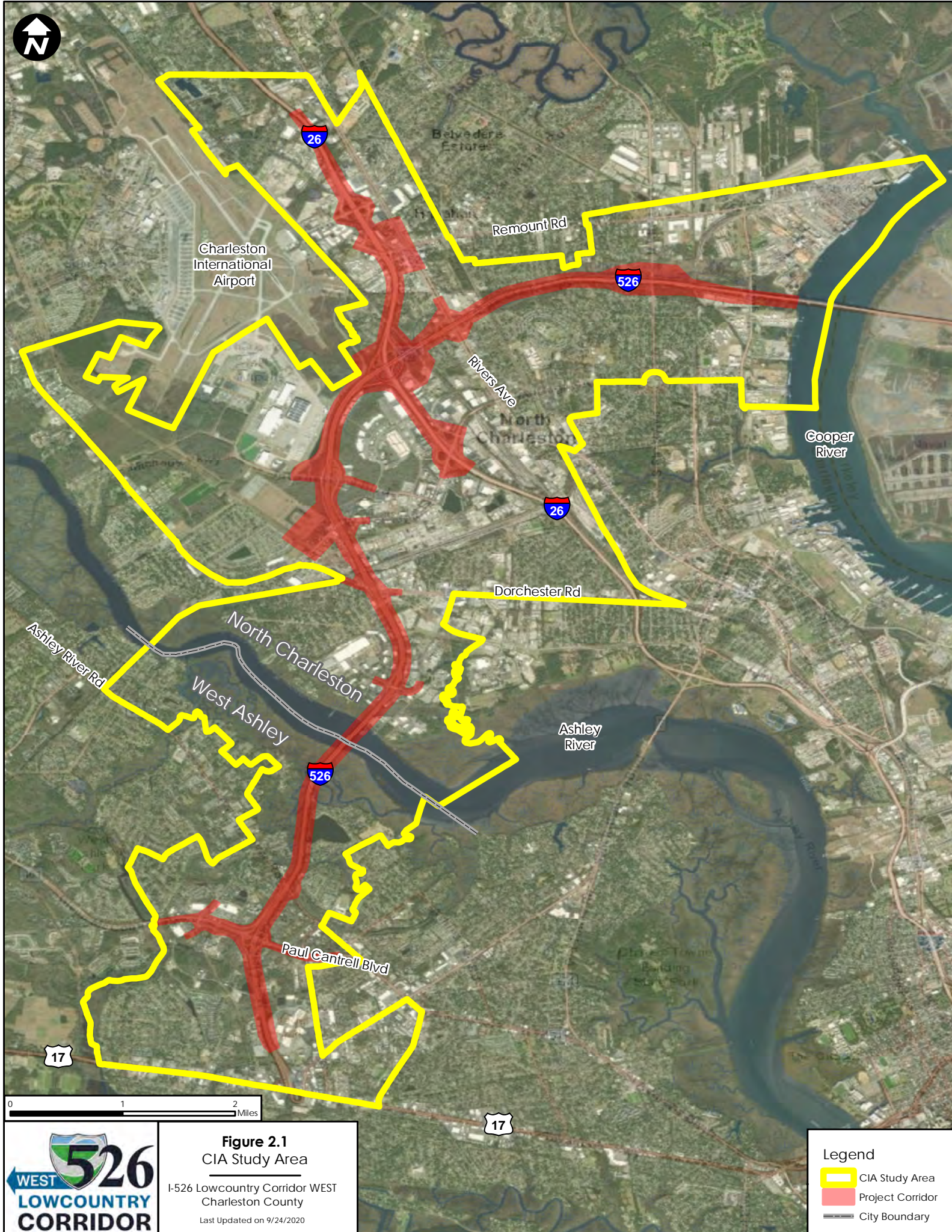
Block Groups within the West Ashley portion of the CIA study area include 450190026111, 450190026121, 450190026133, 450190026134, 450190026141, 450190026142, and 450190027011. Because 4501900 is common to all Block Groups, only the last five digits will be used for references and mapping throughout this CIA. The CIA study area includes portions of Berkeley, Dorchester and Charleston Counties, stretching over 10 miles between the Cooper River in North Charleston south and westward across the Ashley River into the portion of Charleston referred to as West Ashley. The CIA study area was evaluated through field survey and conversations with area residents to identify any special cultural/ethnic populations within the larger minority populations, but none were identified. The CIA study area with the identified Block Groups and specific EJ neighborhoods that are likely to be impacted by the project is shown in Figure 2.2.

### 2.2 DATA SOURCES

Data sources for this CIA include US Census American Community Survey (ACS) data, field surveys, aerial mapping and Global Information Systems (GIS) data, I-526 WEST Community Advisory Council (CAC) input, information provided by the City of North Charleston, stakeholder group feedback, and public comments received at public meetings held in November 2019. The CAC not only provided the project team with valuable insight into neighborhood values and goals, but also helped create the Environmental Justice (EJ) Community Mitigation Plan to offset project impacts by addressing the social needs and priorities of neighborhood residents.

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<sup>3</sup> Environmental Justice. 2020. US Environmental Protection Agency. <https://www.epa.gov/environmentaljustice>.

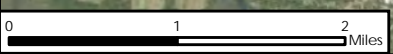
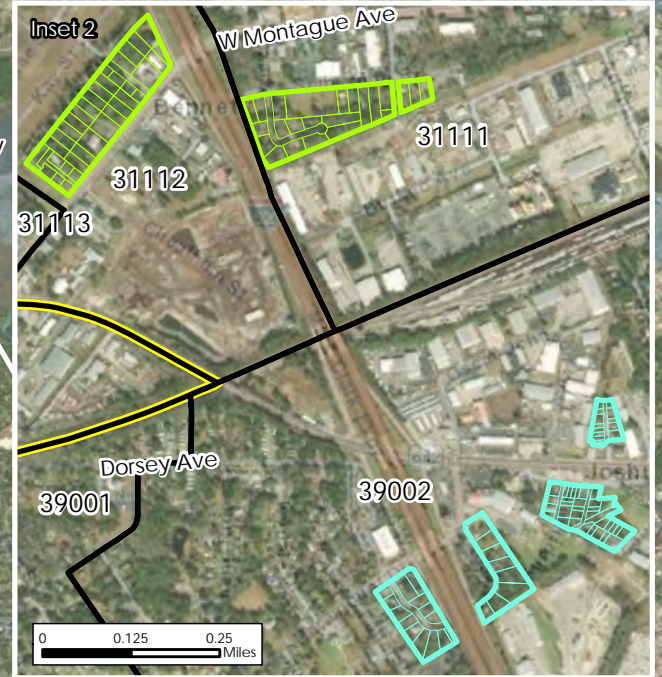
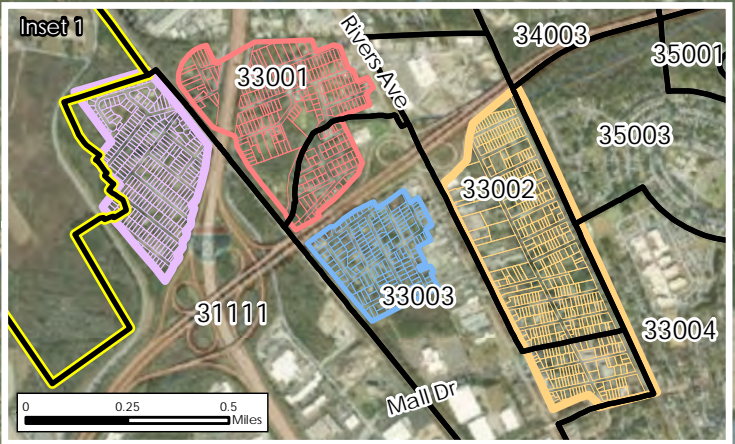
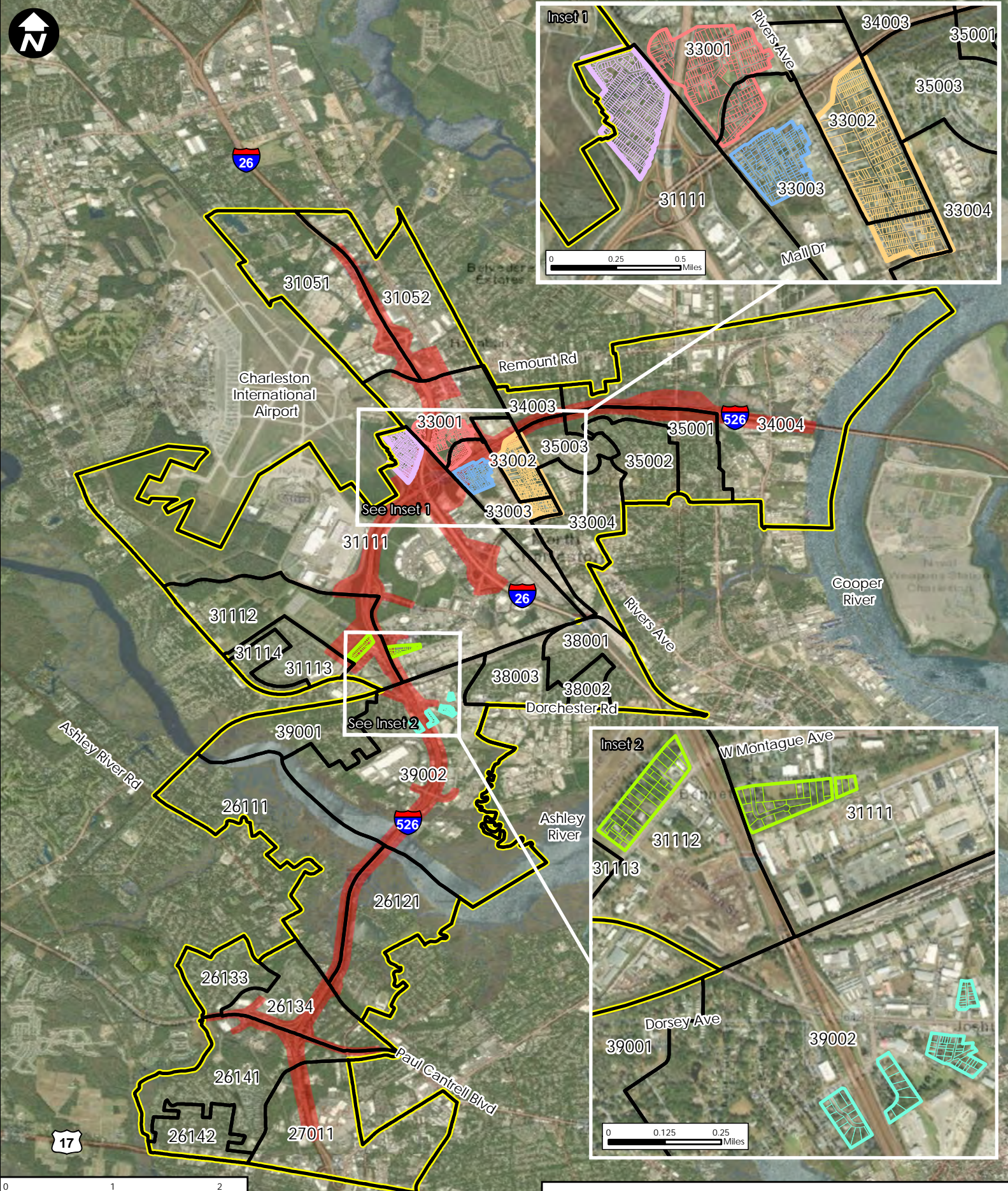


**Figure 2.1**  
CIA Study Area  
I-526 Lowcountry Corridor WEST  
Charleston County  
Last Updated on 9/24/2020

**Legend**

- CIA Study Area
- Project Corridor
- City Boundary





Block Groups and Environmental Justice Neighborhoods  
 Figure 2.2  
 I-526 Lowcountry Corridor WEST  
 Charleston County  
 Last Updated on 7/15/2020

**Legend**

Russelldale	Ferndale	CIA Study Area
Liberty Park	Ada Avenue	Project Corridor
Highland Terrace	Camps	Block Group

# 3.0 EXISTING CONDITIONS

## 3.1 NORTH CHARLESTON

### 3.1.1 History

**Native Inhabitants and the African Slave Trade** – Prior to the 1600s, the Lowcountry was inhabited by Native American tribes who used the Ashley River to trade with neighboring tribes. By the 1600s, the English arrived in the area. Homesteads and farms were subsequently established between the Ashley and Cooper Rivers, with over 60 plantations popping up by the 1700s, many of which were sustained by enslaved laborers brought to Charleston from countries along the West African coast such as Sierra Leone, Guinea and Liberia. At least 100,000 Africans, which was almost 40% of all enslaved people brought directly to the United States from Africa, landed at Gadsden’s Warf in Charleston from 1783 to 1808<sup>4</sup> (the year that the United States banned international slave trade). However, the year 1808 did not mark the total end of slavery, as domestic slave trade continued throughout the United States until 1866. According to the International African-American Museum, about 80% of African-Americans living in the United States today can trace their family history back to Charleston and its port<sup>5</sup> (Figure 3.1).

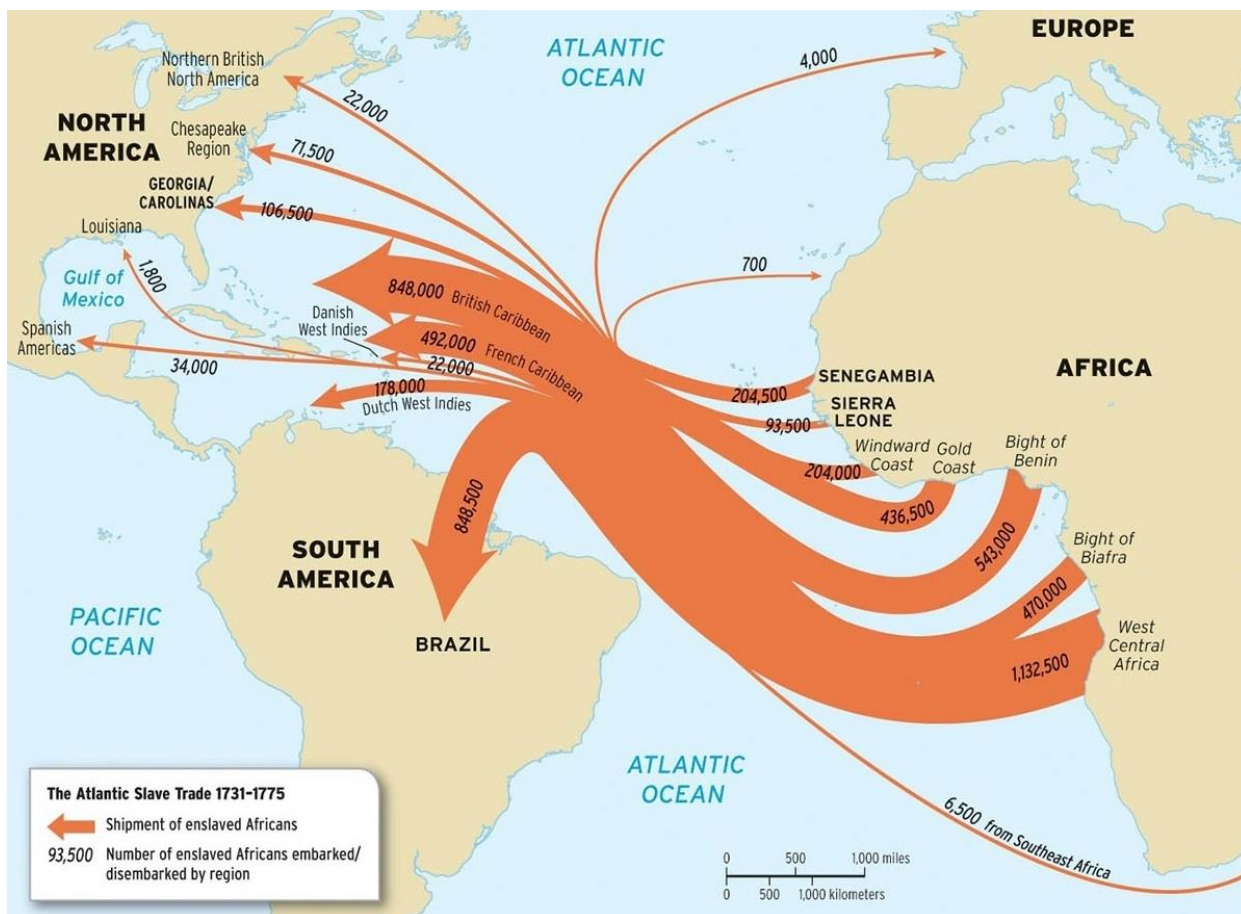


Figure 3.1: Trans-Atlantic Slave Trade, 1731-1775

Source: Schaller et al. (2012) - American Horizons: U.S. History in a Global Context, Volume I: To 1865)

<sup>4</sup> Stodghill, R. 2016. In Charleston, Coming to Terms With the Past. The New York Times. <https://www.nytimes.com/2016/11/20/travel/charleston-south-carolina-past-slave-trade-history.html>.

<sup>5</sup> International African American Museum (IAAM). Slavery in The Lowcountry. <https://iaamuseum.org/history/slavery-in-charleston-and-the-lowcountry/>.

The major agricultural cash crop in the 1700s shifted from tobacco to rice, as intensive tobacco farming depleted the soil of the Lowcountry. It was found that rice could thrive in the humid South Carolina environment. Because this growing environment mirrored that of the African West Coast, enslaved people with rice cultivation knowledge and experience were highly sought after by plantation owners. In fact, rice crop cultivation relied so heavily on slave labor that by the mid-1700s, it is estimated that 70% of South Carolina's population were enslaved Africans<sup>6</sup>.

**Gullah Geechee Culture** – Enslaved Africans retained common tribal customs from their homelands and blended these traditions with “American” and Christian practices to form distinct cultural traditions in the form of language, arts, crafts, spirituality, and food. The isolation of many ‘sea islands’ along the southern coast allowed these practices to flourish and to be passed down for many generations, remaining vibrant parts of local cultural through the 1930’s. Even today, the traditions and cultural influences of the Gullah Geechee and other diverse enslaved African groups can be experienced throughout Charleston, North Charleston and the surrounding areas. The Gullah Geechee dialect is a Creole-based language that began as a simplified form of communication between those speaking different languages, such as slave owners, diverse African groups and European slave traders. It is the only African creole language in the United States today and is preserved orally through generations of Gullah Geechee decedents. Gullah Geechee food is one of the oldest traditions in the United States, with its history rooted in the “make-do” mentality of the enslaved people working South Carolina plantations. Traditionally “southern” foods, such as gumbo or a Lowcountry boil, and the concept of “farm-to-table” can all be traced back to the Gullah Geechee people. Gullah Geechee music traditions evolved from the conditions endured during enslavement and influenced music genres such as spirituals and gospel music, blues, soul, jazz, among others. Gullah Geechee arts and crafts originated out of necessity, largely comprised of objects needed for daily living such as cast nets for fishing, baskets, and textiles used for clothing. The Gullah Geechee spiritual traditions incorporate both African tribal practices as well as Christian practices, with shared values such as belief in a God, community above the individual, respect for elders, and honoring the continuity of life and the afterlife.

**Industrialization** – By 1833, the first railroad extended from Charleston to the North Charleston area (near what is now Rivers Avenue) to move lumber, mail, passengers, and phosphate fertilizer. Its primary purpose was to make Charleston Harbor more accessible than Savannah, Georgia. E.P Burton Lumber Co., Oakdene Cotton Compress, Texaco, and Read Phosphate Co. were major industrial players in the North Charleston area throughout the 1800s.

**Economic Conditions** – One of North Charleston’s oldest neighborhoods, Liberty Hill, located in Block Group 33004 in Figure 2.2, was founded in 1871<sup>7</sup> as a community of liberated slaves. Many freedmen chose to stay in the south due to family ties, community familiarity, overall defiance, or the uncertainty about black treatment in the north. Economic opportunity was also a popular reason for skilled freedmen to stay in the region. Many artisans and craftsmen found success in trades that were traditionally done by enslaved Africans, such as cutting hair or blacksmithing. In Charleston specifically, there were 404 skilled free black craftsmen, with 33% working as carpenters during this period.

During the 20<sup>th</sup> century, World Wars I and II brought about a large expansion of the Navy and the Charleston Naval Yard (currently on the National Register of Historic Places). For almost 100 years, the Naval Shipyard bolstered the economy and development of North Charleston. It was not until the middle of the 20<sup>th</sup> century that significant drainage and highway improvements led to the area’s increase in suitability for residential development. The first suburbs developed, and the area flourished as the economy grew stronger. The City of North Charleston incorporated in 1972. The development of Northwoods Mall, North Charleston Coliseum and the Performing Arts Center, along with a local emphasis on historic preservation, led to growth of the entertainment and service industries.

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<sup>6</sup> City of North Charleston. Historical and Architectural Survey. July 30, 1995. Preservation Consultants Inc.

<sup>7</sup> City of North Charleston. Historical and Architectural Survey. July 30, 1995. Preservation Consultants Inc.

When the Naval Yard closed in 1996, South Carolina lost an estimated \$1.4 billion of annual expenditures. In 1999, the tourism industry in South Carolina also suffered when the National Association for the Advancement of Colored People (NAACP) instilled a boycott on business and travel in South Carolina in protest of the Confederate battle flag flying above the state’s capitol building. In solidarity, the National Collegiate Athletic Association (NCAA) also placed sanctions on the state, opting to hold championship tournaments outside of South Carolina. In July 2015, the South Carolina legislature voted to remove the Confederate battle flag from the capital, effectively ending the NAACP’s 15-year boycott. The end of the boycott has marked the return of large events, such as the NCAA Division I Men’s Basketball Tournament, to South Carolina, along with the prospect of considerate economic growth.<sup>8</sup>

To attract new economic growth and associated technical and environmental jobs, North Charleston initiated a plan to promote revitalization, preservation, sustainability, recreation, education, health care and cultural growth. This led to the opening of the Riverfront Park, Naval Base Memorial site, fishing piers, highly rated hotels, Tanger Outlet Mall, Charleston Southern University, two (soon to be three) port terminals, the Charleston International Airport, and a Boeing Aircraft assembly and delivery prep center for the 787 Dreamliner Aircraft, among many other improvements/new business openings.

**Racial Tensions** – The Charleston and North Charleston area has a long history of racial tension and violence. This violence escalated again in April 2015, when a white police officer fatally shot an unarmed African American man for running from a traffic stop. This event sparked national outrage and the public demanded accountability from the North Charleston Police Department. Two months later, June 2015, a confessed white supremacist walked into the Emanuel African Methodist Episcopal Church, a historically significant African American church, and killed nine people. These events, and many others, have forced racial tensions into the spotlight. The City of Charleston officially apologized for the atrocities of slavery in 2018 in an effort to address the systemic racism that still exists today, but these apologies have done little to ease the resentment and general distrust of government from the African American community.

In addition, Charleston and North Charleston are experiencing a high level of gentrification through an influx of wealthy, predominantly white residents taking up residence in redeveloped neighborhoods, causing property taxes and overall cost of living to increase, displacing primarily African American residents who have lived in these communities for generations. The patterns of increasing displacement and tension have created a strained relationship between local government and longtime residents living in and around North Charleston. Changing household incomes in Charleston County can be studied in Figure 3.2 and average income throughout the CIA study area can be examined in Figure 3.3. Table A.2 and Table A.5 in the CIA Appendix A also contain detailed information of median income data for the CIA study area.

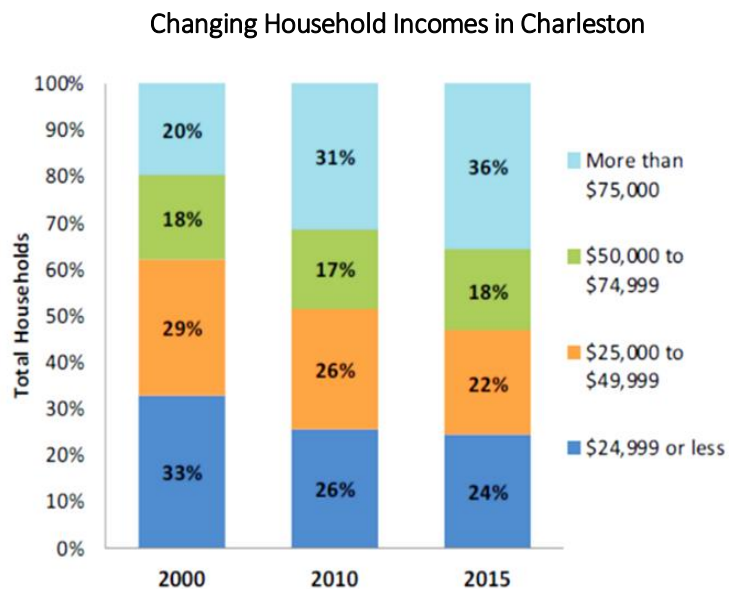
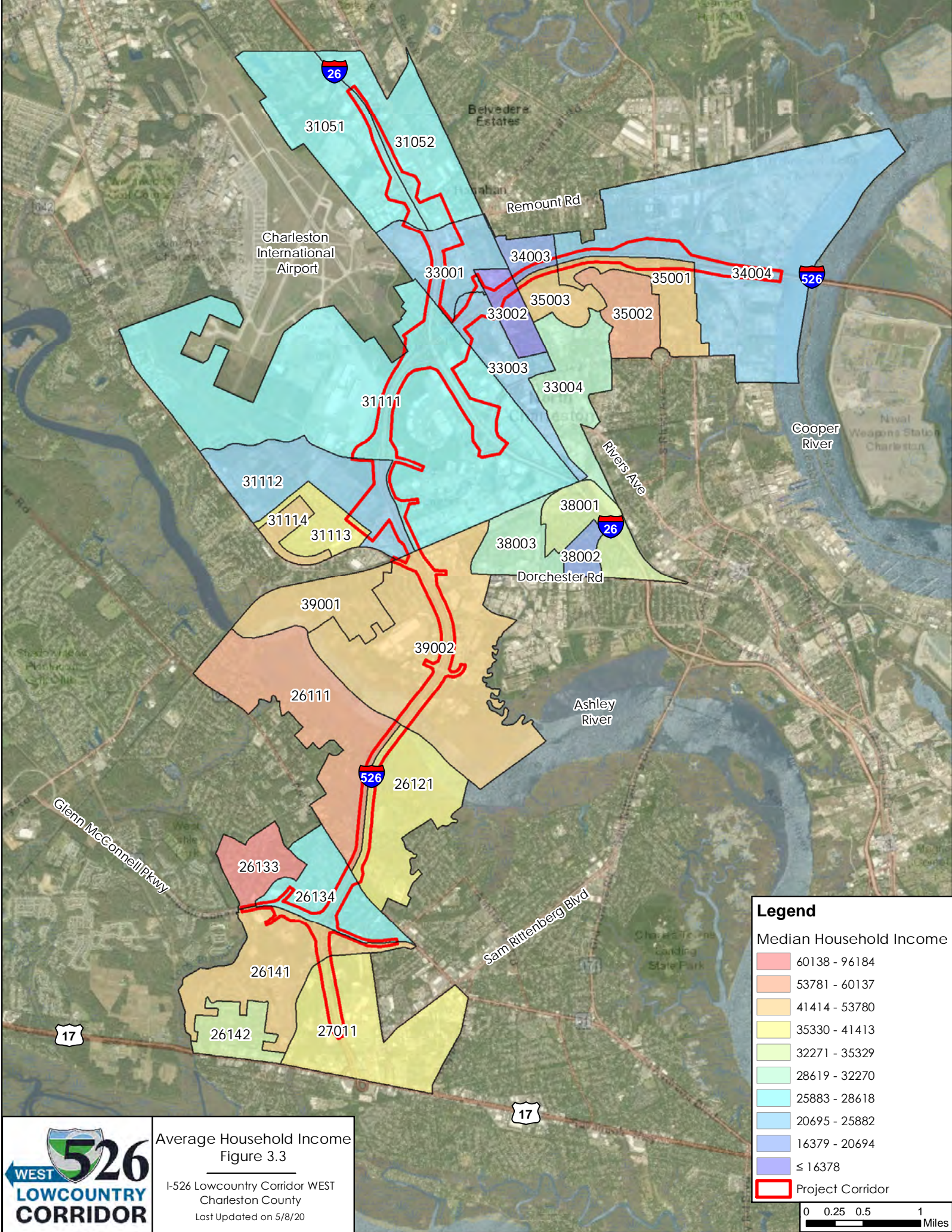


Figure 3.2: Income Disparity in Charleston County.  
SOURCE: Charleston County, 2018.

<sup>8</sup> Boddie, T.M. NAACP holding first national even in SC since ending boycott over Confederate flag. March 5, 2019. The Post and Courier. [https://www.postandcourier.com/politics/naacp-holding-first-national-event-in-sc-since-ending-boycott/article\\_b751b416-3f89-11e9-b55f-0b08439c51cc.html](https://www.postandcourier.com/politics/naacp-holding-first-national-event-in-sc-since-ending-boycott/article_b751b416-3f89-11e9-b55f-0b08439c51cc.html)



**Legend**

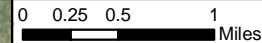
Median Household Income

60138 - 96184
53781 - 60137
41414 - 53780
35330 - 41413
32271 - 35329
28619 - 32270
25883 - 28618
20695 - 25882
16379 - 20694
≤ 16378
Project Corridor



Average Household Income  
Figure 3.3

I-526 Lowcountry Corridor WEST  
Charleston County  
Last Updated on 5/8/20



### 3.1.2 Land Use

**Area Plans** – The project corridor between Virginia Avenue and the Ashley River is located within the jurisdiction of the City of North Charleston, Charleston County, and the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG), which is the designated Metropolitan Planning Organization (MPO) for this area. With the exception of the BCDCOG, each of these entities are responsible for developing plans to guide growth in their planning areas. The BCDCOG incorporates land use recommendations and goals from each local entity into the Charleston Area Transportation Study (CHATS) Long Range Transportation Plan (LRTP). The proposed project was evaluated to determine its consistency with local planning documents. The following documents were referenced to develop discussions on existing and future land use in the North Charleston portion of the CIA study area:

#### PRIME North Charleston 2020 (DRAFT)

- A comprehensive development plan that will provide the framework for the City of North Charleston staff and officials to develop policies and appropriate zoning for a rapidly growing city.

#### 2018 Charleston County Comprehensive Plan

- A plan to establish strategies for Charleston County to maintain and enhance plans outlined in previous comprehensive reviews. This plan emphasizes the importance of rural preservation, fiscal responsibility, providing a more detailed review for growing areas, interagency coordination, and growing within the Urban Growth Boundary.

#### Charleston Area Transportation Study (CHATS) Long Range Transportation Plan (LRTP)

- The LRTP includes a plan for multimodal transportation projects within the CHATS planning area (which includes Berkeley, Charleston, and Dorchester Counties). The plan contains supporting data, including future land use, projected areas of congestion, and high crash locations. The plan is developed in conjunction with a number of public input opportunities.

**Methodology** – The I-526 LCC WEST project team used data from the previously listed transportation and comprehensive plans to analyze land use in North Charleston. Geographic information system (GIS) data was verified by conducting field surveys, collaborating with the Community Advisory Council (CAC), and reviewing digital aerial mapping of the CIA study area. The CIA study area approach is discussed in Section 2.1.

**Existing Conditions** – North Charleston is primarily an incorporated urban/suburban mixed-use area that is comprised of sections of three different counties: Berkeley, Charleston and Dorchester. Existing land use plans for this area are described in the PRIME North Charleston 2020, the 2018 Charleston County Comprehensive Plan, and the CHATS LRTP. Overall, as of 2017, North Charleston primarily has agriculture/forestry (29.3%), single-family residential (14.6%) and multiuse family home (16.9%) land uses. The City of North Charleston annexed approximately 10,000 acres of agricultural/forestry land west of the Ashley River for future development. This annexation helps account for the large percentage of agriculture/forestry land in a developing, and often dense, city. The majority of North Charleston’s residential growth is concentrated in the northern part of North Charleston, in Dorchester County, but the southern part of the city is also beginning to see suburban corridors that are experiencing quick development as the area continues to rapidly grow. Commercial (11.9%) and industrial (5.2%) uses are concentrated near Cross Country Road, Rivers Avenue, Dorchester Road, Ashley Phosphate Road, and Montague Avenue. These areas include Centre Pointe, the North Charleston Coliseum, Convention Center, Tanger Outlet Mall, Northwoods Mall, and the Performing Arts Center. According to the 2018 Charleston County Comprehensive Plan, North Charleston is also within the Urban Growth Boundary for Charleston

County. The goal of this boundary is to appropriately manage higher intensity population increases within the boundary, indicating that Charleston County is anticipating population growth in North Charleston.

The Ashley River Scenic Corridor Overlay District intersects with Block Groups 31112 and 31114 in North Charleston. The designated district is intended to shield the industrial and commercial land in North Charleston from the scenic views that accompany the historic plantations (Drayton Hall, Middleton Place and Magnolia Plantation) across the river in West Ashley<sup>9</sup>. These buffers also have environmental benefits as they help to protect the river from pollutants.

Existing land use within the North Charleston portion of the CIA study area is consistent with the City's current zoning designations, shown in Figure 3.4. Along Virginia Avenue, heavy industrial use (M-2) is the primary land use. Between North Rhett Avenue and Rivers Avenue, zoning/land use is primarily residential (R-1, R-2, and R-3) with the majority consisting of single-family homes (R-1) and mobile homes in higher density residential zoning for multifamily housing (R-2 and R-3). Transitioning westward, land uses include single-family, multi-family, and mobile home residential uses (R-1, R-2, R-3) in the area between Remount Road and Montague Avenue, with general business uses (B-2) along Rivers Avenue (US 78/52).

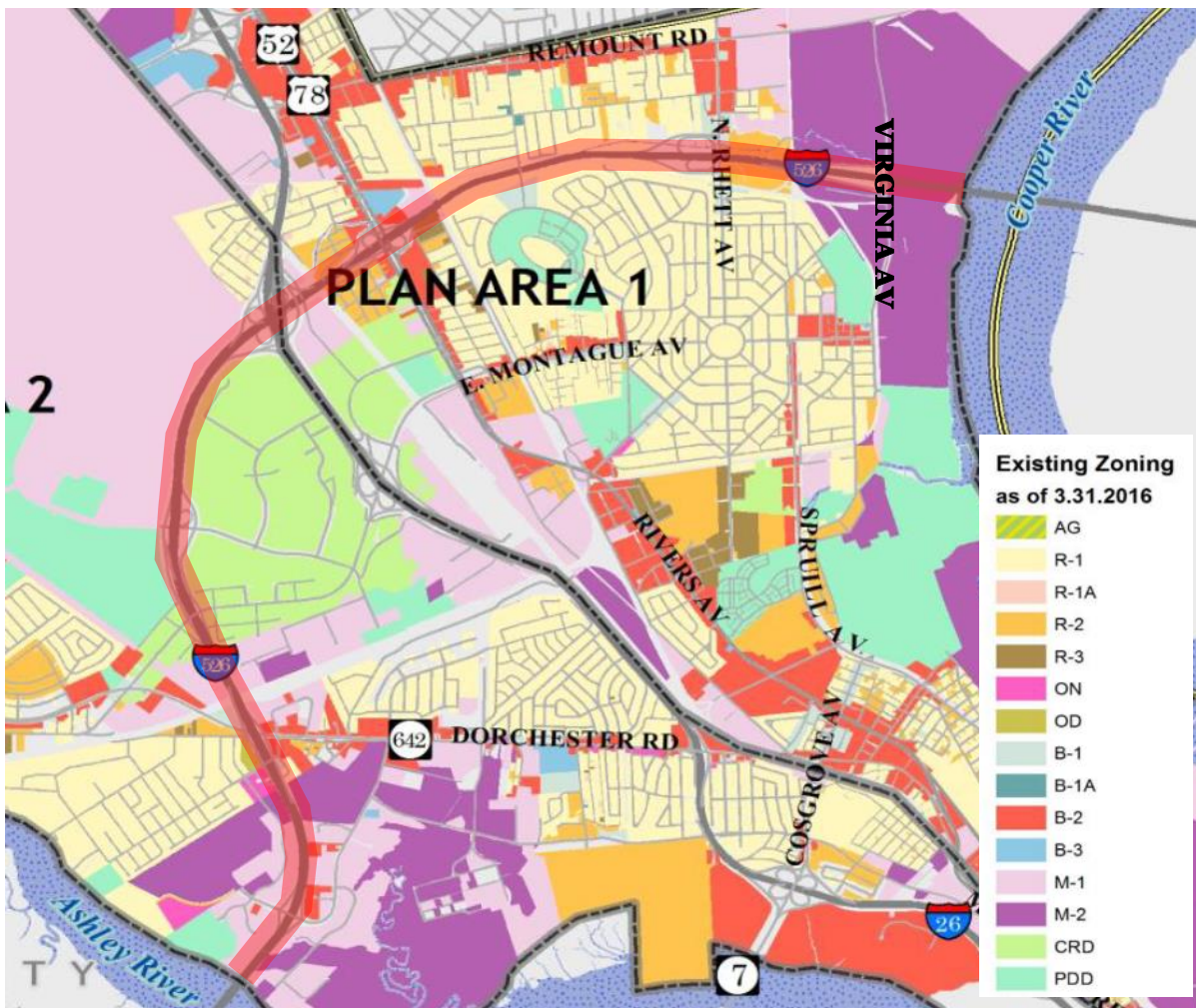


Figure 3.4 Existing Zoning in North Charleston

Source: 2008 Comprehensive Development Plan, as amended in 2016.

<https://www.northcharleston.org/business/construction-and-development/zoning-information-and-verification/comprehensive-plan/>

<sup>9</sup> Charleston County. Zoning and Land Development Regulations Ordinance: Chapter 5, Article 5.7. November 11, 2001. <http://online.encodeplus.com/regs/charlestoncounty-sc/doc-viewer.aspx?secid=404#secid-404>.

Further westward, a commercial redevelopment district (CRD) flanks the east side of the I-526 corridor, including Tanger Outlets, the North Charleston Coliseum and Performing Arts Center, and the Charleston Area Convention Center. The Charleston International Airport and Boeing facilities border I-526 on the west side in this area, which are classified as light industrial uses (M-1). Continuing west and south, I-526 crosses a large railyard where light and heavy industrial uses (M-1, M-2) are the predominant land uses. South of Dorchester Road, there is some residential development to the west (R-1), mixed with a larger amount of general business (B-2), light industrial (M-1), and heavy industrial (M-2) to the east and south to the Ashley River.

### 3.1.3 Population and Housing

Based on data from 2013-2017 American Community Survey (ACS), contained in the CIA Appendix A, the City of North Charleston is most notably composed of 47% African American and 45% Caucasian citizens. Of the Caucasian resident percentage, approximately 10% of the population is Hispanic. According to the United States Census population estimates (based on a 16% growth rate from the data collected during the 2010 Census of Population), the population in North Charleston in 2018 was about 113,237 and the average household income is \$34,813.88. The low household income data for this area is also verified in the 2012-2016 Comprehensive Housing Affordability Strategy data, as over 50% of the residents in the EJ Neighborhoods tract are considered Extremely Low Income or Very Low Income. In addition, 7% of housing units in this area are deemed overcrowded (i.e., more residents than total rooms)<sup>10</sup>.

North Charleston's overall population has grown by almost 40% since 2000, but the African American population in the area has fallen by 2%. This is likely a result of the gentrification of the area and the displacement of approximately 400 families when The Boeing Company, an aerospace industry, bought the land occupied by the Trailwood Mobile Home Park. Residents were forced to vacate their homes, thus displacing many low-income or minority communities. The City of North Charleston Housing Authority manages housing for families that earn Low to Moderate Income (less than \$33,000 for a family of four), but because there are not enough units to accommodate the demand, the waitlist is long. The supply and demand issues for affordable housing was only amplified when, as of May 22, 2019, the North Charleston Housing Authority stated that the waiting list for North Charleston Housing Vouchers was closed and no longer accepting applications. In addition, housing is exceedingly unstable in North Charleston because it has the highest eviction rate of any large city in America (165 per 1,000 renters in 2016)<sup>10</sup>. Nonprofits such as The Low Country Alliance for Model Communities (LAMC) and Metanoia work to supplement the lack of affordable housing in the area through programmatic grants and land trusts. Joseph Paul Apartments Inc. on Bonds Avenue in North Charleston is one of only a handful of housing options for elderly individuals and persons with disabilities in the local area. Although prevalent in North Charleston, the issue of affordable housing is not one contained to the city limits. According to the South Carolina Housing Authority, there are only enough subsidized rental units to serve one in five low-income renter households in South Carolina<sup>10</sup>.

The minority population percentage of the CIA study area varies considerably and ranges anywhere from 9% in Block Group 35003 to 94% in Block Group 31112. Population data sorted by race can be studied in detail in Table A.4 in Appendix A. The percentage of households over 65 in the Block Group neighborhoods ranges from the lowest percentage in Block Group 31112 (3%) to the highest in Block Group 39001 (26%). Inversely, at 9% Block Group 39001 has the lowest percentage of households with children under 18 and at 50% Block

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<sup>10</sup> Grady, B. P. PhD. Housing Conditions at the I-26/I-526 Site: SCDOT Meeting. February 11, 2020. South Carolina State Housing Finance and Development Authority.



Group 31112 has the most. Households with a Limited English Proficiency (LEP) ranges from 0% (10 of the Block Groups) to the highest percentage in Block Groups 33002 and 34003 at 25% and 26%, respectively.

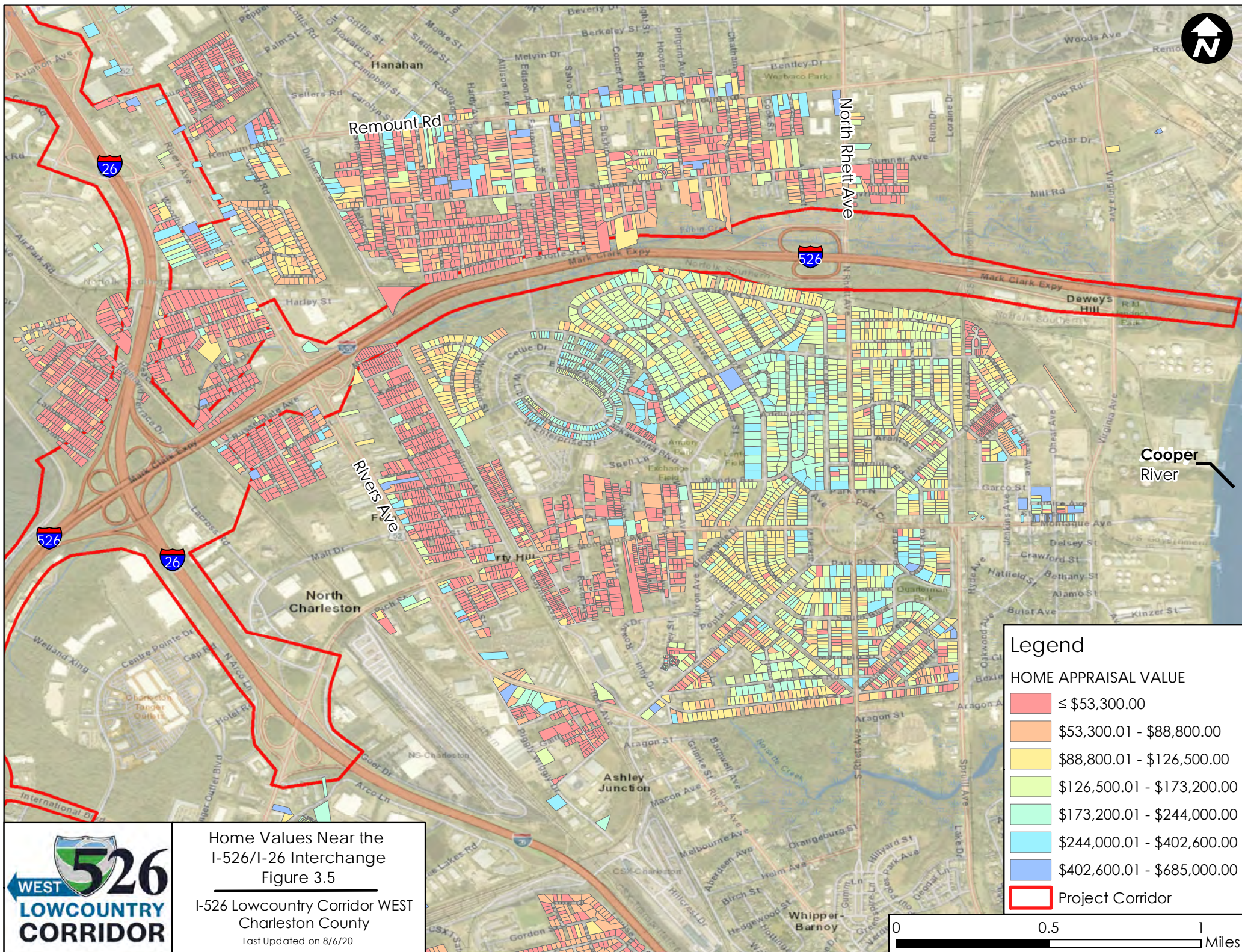
Depending on neighborhood, the most common housing type can vary drastically. The Park Circle area (Block Groups 35001, 35002, 33004) and the southern half of Oak Terrace Preserve (Block Group 35003) are primarily single-family detached homes with a yard. This is a rapidly gentrifying area with new classic Charleston style housing (including bright colors, front porches, alleys for garage access) under construction (Photograph 1). The northern half of Oak Terrace (which is quickly becoming similar in style to the southern half) (Block Group 35003), Ferndale (Block Groups 33002, 33003), Charleston Farms (Block Groups 34003, 34004), Russelldale (Block Group 33003), and the Liberty Park (Block Group 33001, 33003) areas have a mixture of ranch style single family detached homes, mobile homes (Photograph 2), and multi-unit complexes. Approximately 20% of residents located in the Russelldale and Highland Terrace Communities rely upon the Section 8 housing program for assistance.



*Photograph 1: Example of gentrification in the Oak Terrace Preserve neighborhood in North Charleston*  
*SOURCE: Google Street View.*

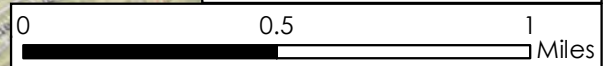


*Photograph 2: Example of the homes found in low-income communities such as Ferndale or Russelldale*  
*SOURCE: Google Street View.*



Home Values Near the I-526/I-26 Interchange  
 Figure 3.5  
 I-526 Lowcountry Corridor WEST  
 Charleston County  
 Last Updated on 8/6/20

Legend	
HOME APPRAISAL VALUE	
≤ \$53,300.00	
\$53,300.01 - \$88,800.00	
\$88,800.01 - \$126,500.00	
\$126,500.01 - \$173,200.00	
\$173,200.01 - \$244,000.00	
\$244,000.01 - \$402,600.00	
\$402,600.01 - \$685,000.00	
Project Corridor	



The median home values across the CIA study area in North Charleston also vary substantially. On the lower end of the range are homes located in Block Group 33002 (Ferndale neighborhood) for an average of approximately \$31,800. The homes on the upper end of the median value range in Block Group 35003 (Oak Terrace Preserve/Park Circle) are approximately \$231,200 (with new construction peaking in the \$400,000). Homes along the Ashley River in North Charleston max out this range with houses valued at over \$1 million. Home appraisal values near the I-526/I-26 interchange are shown in Figure 3.5. The Park Circle and Oak Terrace Preserve areas have significantly higher home values in the area.

The majority of houses in the CIA study area were built on average from 1980 through 2000, with an increasing number of houses currently under construction or recently built. Gentrification appears to be a main factor as the increased home values and new construction trend continues to move west from the Cooper River. The high level of gentrification in the North Charleston area has resulted in the displacement of African American residents who have lived in the area for generations. This includes an associated increase in home values and the unaffordability of home ownership in Charleston County, particularly in comparison to the surrounding Dorchester and Berkeley Counties. According to a 2019 report released by a property information service Attom Data Solutions, the average Charleston County home price is \$364,000 and the average weekly wage is \$964, while the average home price in the surrounding counties is approximately \$221,000 with weekly average wages at \$882. Rental projections into 2020 are \$1,657 per month for a three-bedroom unit in all three counties. The price to income ratio in Charleston makes renting much more affordable than owning<sup>11</sup>. As such, it is unsurprising that up to 68% of the potentially impacted homes in the EJ communities (Russelldale, Ferndale, Liberty Park, Highland Terrace, West Ada Street, East Ada Street, Ozark Street, and Seiberling Road) are renter occupied. EJ communities are further described in detail in the DEIS Appendix G.

A lower median home value also correlates with the high percentage of renter occupied homes in the North Charleston CIA study area. Block Group 33002 (which is the same Block Group with the lowest median home value - Ferndale) has a notable 81% of homes which are renter occupied, while only 19% are owner occupied. The same trend is true for higher median homes and a high percentage of owner-occupied homes. Block Group 35003 (which is the same Block Group with the highest median home value) has 85% of the homes occupied by their owners, while 15% are rented out. Vacancy rates are similar across the board, peaking at 25% of homes in Block Group 33001.

Census data shows that most people have access to at least one vehicle for transportation purposes, which is supported by data that shows every Block Group but one landing above the 90% mark for households that have access to a vehicle. Block Group 38002 is an outlier with approximately 17% of residents living without access to a vehicle.

### 3.1.4 Community Services and Facilities

The following community features and services located within the North Charleston portion of the CIA study area can be viewed in Figure 3.6.

The regional library system is the Charleston County Public Library Branches. These include the Otranto Regional Library, which is closer to the Goose Creek area, and the Cooper River Memorial Library, which is located in the heart of downtown North Charleston. The libraries give local citizens access to computers,

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<sup>11</sup> The Post and Courier. "Survey: It's cheaper to rent in Charleston County, but better to buy in Berkeley and Dorchester." January 9, 2017. Web. [https://www.postandcourier.com/business/survey-it-s-cheaper-to-rent-in-charleston-county-but/article\\_95a8f8f6-c87b-11e6-bc01-672a54e4dd0f.html](https://www.postandcourier.com/business/survey-it-s-cheaper-to-rent-in-charleston-county-but/article_95a8f8f6-c87b-11e6-bc01-672a54e4dd0f.html)

printing, summer programs, music and a variety of other opportunities within the community. The R Keith Summey North Charleston Library is planned to take the Cooper River Memorial Library's place at the corner of Rivers Avenue and Dorchester Road. Its opening date has not been announced at the time this document was prepared.

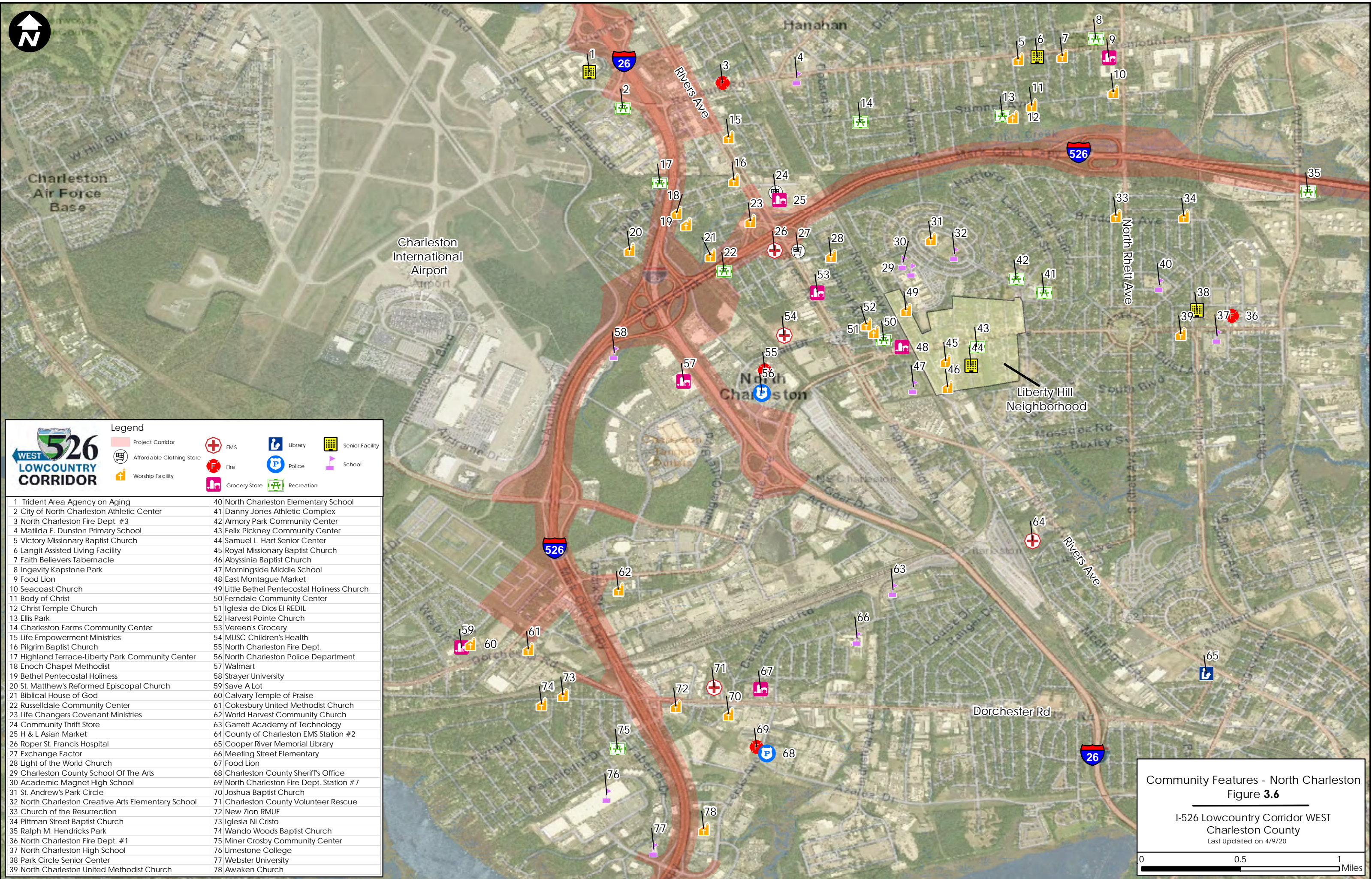
Healthcare in North Charleston is provided by many different private practices throughout the area, but chiefly by Trident Medical Center and Medical University of South Carolina Health. Both medical facilities are located in the northern region of North Charleston. Emergency services are provided by the North Charleston Fire Department, Charleston County Sheriff, and the Charleston Volunteer Rescue Squad. In total, there are approximately five EMS Medic locations, 15 Charleston County Fire Stations, and ten police departments throughout North Charleston.

Public schools located in North Charleston are part of Charleston County's District Four. There are 17 elementary, five middle, one high school, and two charter schools throughout North Charleston, with the majority located near the southern portion of the city. The main schools that serve communities within the CIA study area include the following: Meeting Street Elementary, Midland Park Primary, Pinehurst Elementary, North Charleston Elementary School, Matilda F. Dunston Elementary School, North Charleston Creative Arts Elementary School, Morningside Middle School, Northwoods Middle School, Zucker Middle School, North Charleston High School, and Stall High School. There are also eight universities and colleges located in North Charleston including Strayer University, Limestone College, College of Charleston - North Campus, Webster University, Virginia College, Trident Technical College, Charleston Southern University, and Miller-Motte Technical College.

There are many religious institutions located in North Charleston, including churches and Iglesias, with approximately 33 that serve the neighborhoods within the CIA study area. Notably, Royal Missionary Baptist Church provides 34 different outreach opportunities in the Liberty Hill community. This church operates a food bank, has a prison inmate outreach, hosts summer camps for kids and teaches members of the community on health/wellness education, among many other programs. Overall, Royal Missionary Baptist Church is a strong proponent of the North Charleston community.

North Charleston has many parks and facilities for recreation. Notably, the Riverfront Park is a popular destination for residents and visitors as it hosts an annual Independence Day festival and is home to a Navy Base Memorial. Collins Park is also often visited as it has hosted the Dixie Majors World Series several times. Neighborhood parks in the CIA study area include the following: Danny Jones Athletic Complex, Armory Park, Ellis Park, Ingevity Kapstone Park, Quarterman Park, and Ralph M. Hendricks Park, all of which can be seen in Figure 3.6.

There are also 21 community center facilities throughout North Charleston. These centers are run by the city and provide nearby communities with facilities such as basketball courts, event rooms for renting, playgrounds, picnic areas, and bathrooms. They also provide a wide variety of programs and activities designed to meet the needs of nearby residents such as day care throughout the year and summer camps during the months of June and July. The different community centers allow distinct neighborhoods to have a place for community gathering. Notable centers within the CIA study area include the Russelldale Community Center, Charleston Farms Community Center, Ferndale Community Center, Felix Pinckney



**WEST 526 LOWCOUNTRY CORRIDOR**

**Legend**

- Project Corridor
- Affordable Clothing Store
- Worship Facility
- EMS
- Fire
- Grocery Store
- Library
- Police
- Recreation
- Senior Facility
- School

1 Trident Area Agency on Aging	40 North Charleston Elementary School
2 City of North Charleston Athletic Center	41 Danny Jones Athletic Complex
3 North Charleston Fire Dept. #3	42 Armory Park Community Center
4 Matilda F. Dunston Primary School	43 Felix Pickney Community Center
5 Victory Missionary Baptist Church	44 Samuel L. Hart Senior Center
6 Langit Assisted Living Facility	45 Royal Missionary Baptist Church
7 Faith Believers Tabernacle	46 Abyssinia Baptist Church
8 Ingevity Kapstone Park	47 Morningside Middle School
9 Food Lion	48 East Montague Market
10 Seacoast Church	49 Little Bethel Pentecostal Holiness Church
11 Body of Christ	50 Ferndale Community Center
12 Christ Temple Church	51 Iglesia de Dios El REDIL
13 Ellis Park	52 Harvest Pointe Church
14 Charleston Farms Community Center	53 Vereen's Grocery
15 Life Empowerment Ministries	54 MUSC Children's Health
16 Pilgrim Baptist Church	55 North Charleston Fire Dept.
17 Highland Terrace-Liberty Park Community Center	56 North Charleston Police Department
18 Enoch Chapel Methodist	57 Walmart
19 Bethel Pentecostal Holiness	58 Strayer University
20 St. Matthew's Reformed Episcopal Church	59 Save A Lot
21 Biblical House of God	60 Calvary Temple of Praise
22 Russelldale Community Center	61 Cokesbury United Methodist Church
23 Life Changers Covenant Ministries	62 World Harvest Community Church
24 Community Thrift Store	63 Garrett Academy of Technology
25 H & L Asian Market	64 County of Charleston EMS Station #2
26 Roper St. Francis Hospital	65 Cooper River Memorial Library
27 Exchange Factor	66 Meeting Street Elementary
28 Light of the World Church	67 Food Lion
29 Charleston County School Of The Arts	68 Charleston County Sheriff's Office
30 Academic Magnet High School	69 North Charleston Fire Dept. Station #7
31 St. Andrew's Park Circle	70 Joshua Baptist Church
32 North Charleston Creative Arts Elementary School	71 Charleston County Volunteer Rescue
33 Church of the Resurrection	72 New Zion RMUE
34 Pittman Street Baptist Church	73 Iglesia Ni Cristo
35 Ralph M. Hendricks Park	74 Wando Woods Baptist Church
36 North Charleston Fire Dept. #1	75 Miner Crosby Community Center
37 North Charleston High School	76 Limestone College
38 Park Circle Senior Center	77 Webster University
39 North Charleston United Methodist Church	78 Awaken Church

Community Features - North Charleston  
 Figure 3.6  
 I-526 Lowcountry Corridor WEST  
 Charleston County  
 Last Updated on 4/9/20

0 0.5 1 Miles

Community Center, Miner Crosby Community Center, and the Highland Terrace/Liberty Park Community Center.

While there are many grocery stores throughout North Charleston, there are relatively few within the CIA study area. Those within the Environmental Justice communities include H&L Asian Market, Vereen's Grocery, and East Montague Market. Larger grocery stores, such as Walmart to the southwest and Piggly Wiggly to the northeast, are located about a mile from these communities. Other grocery stores in the CIA study area include Food Lion and Family Dollar. The closest affordable clothing stores to the Environmental Justice communities in the CIA study area includes the Community Thrift Store in the Liberty Mall shopping center off of Rivers Avenue and north of I-526 and Exchange Factor, also off of Rivers Avenue, on the south side of I-526.

Places of historic and archeological importance in North Charleston form a lengthy list due to the area's rich history and national importance as a port. Among many others, the National Register of Historic Places lists the following districts or buildings found within North Charleston: General Asbestos & Rubber Company (GARCO), Charleston Navy Yard Officers' Quarters, Charleston Navy Yard Historic District, Charleston Naval Hospital, and the Ashley River Historic District. The main mill at GARCO was built in 1917 and served as a major regional employer in the area. They provided materials for both world wars and created the soles of the spacesuit boots used in the first moon landing. GARCO is located between the Park Circle neighborhood and the Cooper River. The Charleston Navy Yard was another major employer in North Charleston. It was developed in 1901 and operated as a port within the Charleston Navy Base until 1996. The Naval Yard, base and hospital are located southeast of the project, along the banks of the Cooper River.

### 3.1.5 Access and Mobility

Major roads in the CIA study area include I-526, I-26, Rivers Avenue, Dorchester Road, Remount Road, and Montague Avenue. According to the South Carolina Department of Transportation (SCDOT), the 2018 Average Annual Daily Traffic (AADT) at the I-526 and I-26 intersection was approximately 159,000.

Residents in the North Charleston area have access to Charleston Area Regional Transportation Authority (CARTA) and TriCounty Link. CARTA serves the urban and suburban area of the Tri-County (Berkeley, Charleston, and Dorchester) region. It provides service between larger communities, has regular routes to major destinations and provides free transportation in the downtown area. Transit routes within the CIA study area in North Charleston include routes 10, 103, 104, 12, 13, XP4, 11, XP3, and XP1. CARTA also manages the Tel-A-Ride Service which meets residents with disabilities to transport them around the region. TriCounty Link provides similar services to more rural parts of North Charleston. They have 49 buses that are American with Disabilities Act (ADA) compliant and serve areas as far as Summerville.

According to the *2018 Charleston County Comprehensive Plan*, 3.6 million people traveled into and out of Charleston using the Charleston International Airport in 2016. Located in North Charleston, the airport provides access to the area and is a significant resource for the local economy. There are plans for continued growth due to the region's increase in population and growth in manufacturing, health care, tourism, and technology industries.

There are plans for a Bus Rapid Transit (BRT) program in which the main goal is to give travelers an alternative to sitting in traffic. The BRT will originate in Summerville and is proposed to have 18 different substations and end in downtown Charleston. There will be 16 buses in the fleet and at least three stops located within the North Charleston area.

According to the 2018 American Community Survey, 94% of employed North Charleston residents drive to

work, with 1% utilizing public transportation, 3% bicycling or walking, and 2% working at home. The average commute time is 28.5 minutes, with many residents utilizing main interstates such as I-526 or I-26.

Sidewalks are present on both sides of Rivers Avenue, but there are a number of foot paths on the east side of Rivers Avenue adjacent to the Ferndale neighborhood. (Photograph 3). To the east, there are two footpaths from the Liberty Park neighborhood to Rivers Avenue (Photograph 4). Another notable foot path exists between West and East Deacon Roads in the Liberty Park neighborhood (Photograph 5). Taylor Street has sidewalk on one side of the roadway but is lacking a crosswalk from the sidewalk to Highland Terrace Community Center. There are sidewalks on both sides of Dorchester Road and Paramount Drive under I-526. There are no sidewalks on International Boulevard or Leeds Avenue. There is no sidewalk access to the Russelldale Community Center. There are no designated bicycle routes in the North Charleston portion of the CIA study area nor are there any bicycle accommodations along the above-mentioned roadways.

### 3.1.6 Employment and Income

The North Charleston area primarily employs workers in construction/manufacturing, retail, accommodations, and health care/social assistance sectors. These industries are supported by the Port of Charleston, Charleston International Airport, and the multiple railroad lines (Palmetto Railways, Norfolk Southern and CSX Transportation) that move goods to and from the North Charleston area. The Boeing Company and Roper St. Francis Healthcare are the largest private employers in Charleston County.

Joint Base Charleston is located near the Charleston International Airport and is one of 12 joint bases that were formed in 2005 as part of the US Department of Defense Base Realignment and Closure (BRAC) process. The Joint Base of Charleston supports over 60 Department of Defense and Federal Agencies and provides service and support to over 90,000 military members. The base also maintains \$7.5 billion in property and capital assets making it a large economic driver in the area<sup>12</sup>.

According to the ACS 2016 data, unemployment rates in North Charleston range from 0% (Block Groups 35001, 35003, 39001) to 27% (Block Group 34003) for an average rate of approximately 8%. In 2016, the average unemployment rate in South Carolina was 5.3%, while the United States average was 4.7%, both lower than the North Charleston rate. The median household income for Block Groups ranges from slightly over \$16,300 in Block Group 33002 to \$57,788 in 35002 with an average of \$34,813 for the North Charleston CIA study area, which is lower than that for South Carolina of \$54,336. The percent below poverty level ranges from 14% in Block Group 39001, to 87% in Block Groups 33002, with an average of 44% which is significantly higher than South Carolina at 16.7% in 2016.

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<sup>12</sup> Joint Base Charleston. 2020. Team Charleston... The Launch Point for the Nation's Resolve. <https://www.ibcharleston.ib.mil/About-Us/>.



Photograph 3: Foot paths between Ferndale and Rivers Avenue  
 SOURCE: Google Aerial



Photograph 4: Foot paths north of I-526 between Russelldale/Liberty Park and Rivers Avenue



Photograph 5: Foot paths across double-track railroad under I-26 between West Deacon Street/Lacrosse Road and East Deacon Street

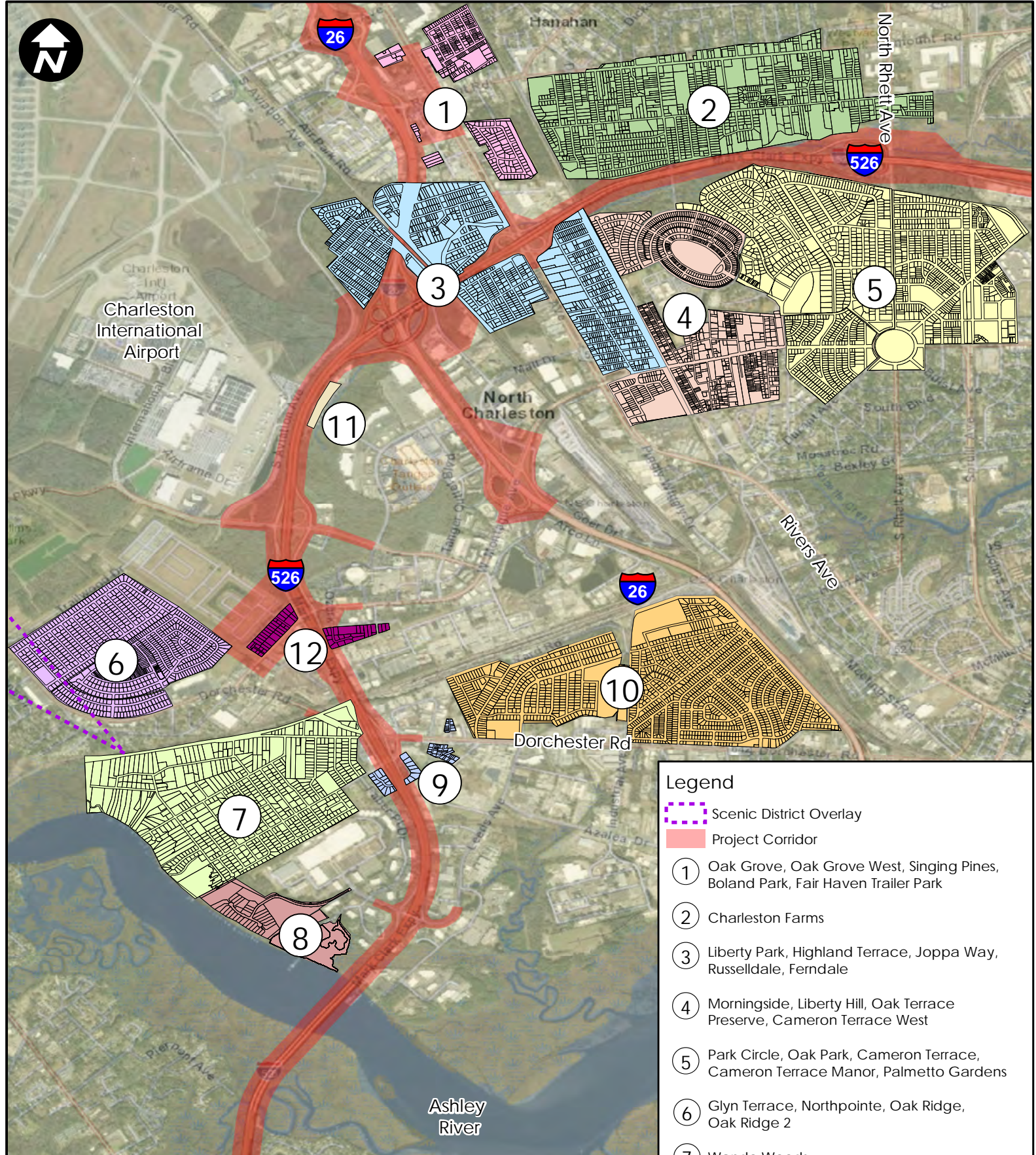


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### 3.1.7 Neighborhoods

The CIA study area within North Charleston includes ten geographic areas that encompass a total of 35 neighborhoods. The twelve areas were determined by grouping similar housing types and demographics. As shown in Figure 3.7, the following areas are within the CIA study area and immediate vicinity:

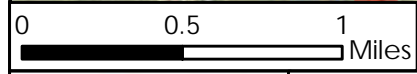
- Area 1: Oak Grove, Oak Grove West, Singing Pines, Boland Park, Fair Haven Trailer Park
- Area 2: Charleston Farms
- Area 3: Liberty Park, Highland Terrace, Joppa Way, Russelldale, Ferndale
- Area 4: Morningside, Liberty Hill, Oak Terrace Preserve, Cameron Terrace West
- Area 5: Park Circle, Oak Park, Cameron Terrace, Cameron Terrace Manor, Palmetto Gardens
- Area 6: Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge 2, Firestone Road and Ozark Street
- Area 7: Wando Woods
- Area 8: Plantation Isles, Reverie on the Ashley
- Area 9: West Ada Ave, East Ada Ave, Highpoint Road
- Area 10: Brentwood, Waylyn
- Area 11: Centre Pointe Apartments
- Area 12: Camps





Charleston International Airport

North Charleston

Ashley River



**Legend**

-  Scenic District Overlay
-  Project Corridor
- ① Oak Grove, Oak Grove West, Singing Pines, Boland Park, Fair Haven Trailer Park
- ② Charleston Farms
- ③ Liberty Park, Highland Terrace, Joppa Way, Russelldale, Ferndale
- ④ Morningside, Liberty Hill, Oak Terrace Preserve, Cameron Terrace West
- ⑤ Park Circle, Oak Park, Cameron Terrace, Cameron Terrace Manor, Palmetto Gardens
- ⑥ Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge 2
- ⑦ Wando Woods
- ⑧ Plantation Isles, Reverie on the Ashley
- ⑨ West Ada Ave, East Ada Ave, Highpoint Road
- ⑩ Brentwood, Waylyn
- ⑪ Centre Pointe
- ⑫ Camps

North Charleston Neighborhoods  
 Figure 3.7  
 I-526 Lowcountry Corridor WEST  
 Charleston County  
 Last Updated on 7/15/2020



### 3.1.7.1 Area 1: Oak Grove, Oak Grove West, Singing Pines, Boland Park, Fair Haven Trailer Park

Area 1 includes the neighborhoods of Oak Grove, Oak Grove West, Singing Pines, Boland Park and Fair Haven Trailer Park (Block Groups 31052 and 33001). These neighborhoods are located east of I-26, between the interstate and the railroad tracks. Most of the houses are directly behind commercial properties on Rivers Avenue including Taco Bell, O'Reilly Auto Parts, Gene's Jewelry & Pawn, Zips Car Wash, and Dixie Furniture among other businesses. Boland Park and Palmetto Heights are small residential communities west of commercial properties such as Wells Fargo Bank, Geico Insurance and NAPA Auto Parts on Rivers Avenue. Area 1 neighborhoods include Environmental Justice communities that are expected to be impacted by the I-526 LCC WEST project. Any potential impacts to these Environmental Justice communities need to be evaluated thoroughly to ensure that fair and just outreach opportunities are provided to the residents living there.

#### ***Population and Housing***

The houses in Area 1 were built between 1960 and 2017, with the average being built around 2003. On average, these houses were constructed on approximately 0.16-acre lots and the appraisal estimate for residential housing is \$56,085. The houses in Singing Pines are primarily single family, single story and brick. Trees are sparse and not largely developed. Oak Grove, West Oak Grove, Fair Haven Trailer Park and Boland Park have multifamily and single-family housing. These include mobile homes, single story brick homes, vinyl siding homes and small apartment buildings.



*Photograph 6: Standard housing example in the Area 1 neighborhoods*  
*SOURCE: Google Street View.*

#### ***Community Services and Facilities***

Although close to the Berkeley County border, Area 1 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Matilda Dunston Elementary School and North Charleston Elementary School, Midland Park Primary, Pinehurst Elementary School, Morningside Middle School, Stall High School and North Charleston High School. There is a makeshift “library” in the Singing Pines neighborhood which provides books for free in an effort to encourage reading. Books are often returned after use and anyone is encouraged to donate their used books. Closer to Oak Grove, there is also the Persephone Community Center and the House of God religious facility. Fair Haven Trailer Park is also located

directly behind Shield Ministries, a nonprofit organization that works to help former convicted prisoners to adjust to and thrive outside of prison.

### ***Mobility and Accessibility***

The neighborhoods in Area 1 have sidewalks that run along Robertson Boulevard and Gumwood Boulevard. These sidewalks run the length of the Oak Grove neighborhood, providing sporadic connectivity to the Persephone-Moultrie Community Center and the House of God worship facility. The closest bus stops are located at Rivers Ave/Remount Rd NB and Rivers Ave/Gene's Pawn Shop.

### **3.1.7.2 Area 2: Charleston Farms**

Area 2 includes the neighborhood of Charleston Farms (Block Groups: 34003 and 34004). This neighborhood is located directly east of I-26 and north of I-526, stopping at Remount Road. Charleston Farms is a large primarily residential community but includes a small shopping center called Remount Village. Area 2 neighborhoods include Environmental Justice communities that are expected to be impacted by the I-526 LCC WEST project. Any potential impacts to these Environmental Justice communities need to be evaluated thoroughly to ensure that fair and just outreach opportunities are provided to the residents living there.



*Photograph 7: Example of standard housing in the Area 2 neighborhoods.  
SOURCE: Google Street View.*

### ***Population and Housing***

The houses in Area 2 were built between 1971 and 2017, with the average being built around 2005. On average, these houses were constructed on approximately 0.24-acre lots and the appraisal estimate for residential housing is \$56,115. Trees are sparse in this commercial and industrially focused area. Charleston Farms has single-family, brick and vinyl housing, multiple single-family mobile home parks (Photograph 7) and multi-family apartments. The trees are larger in the backyards and sparse in the front yards of Area 2.

### ***Community Services and Facilities***

Although close to the Berkeley County border, Charleston Farms is located within the City of North Charleston, in Charleston County. This neighborhood attends Matilda Dunston Elementary School, North Charleston Elementary School, Morningside Middle School, and North Charleston High School. There is also the Charleston Farms Community Center, eight religious facilities, Ellis Park, and Kapstone Park that serve those living within the Charleston Farms neighborhood.

### ***Mobility and Accessibility***

The neighborhoods in Area 2 have sidewalks that run along Sumner Avenue, Attaway Street, Dobson Street, Buskirk Avenue and Remount Road, among others. Sidewalks in this area do not have a curb or gutter and are primarily located on main roads, with very few present on sideroads. The sidewalk on Sumner Avenue connects residents with community facilities such as Christ Temple Church, Charleston Farms Community Center and Ellis Park. There are multiple bus stops located along Remount Road at the north end of Area 2.

### **3.1.7.3 Area 3: Liberty Park, Highland Terrace, Joppa Way, Russelldale, Ferndale**

Area 3 includes the neighborhoods of Liberty Park, Highland Terrace, Joppa Way, Russelldale, Ferndale (Block Groups: 33002, 33003, 33001, 31111). These neighborhoods are located directly on the east and west sides of I-26 and on the north and south sides of I-526, near the I-20/I-526 interchange. Although primarily residential, these neighborhoods border many commercial businesses along Rivers Avenue such as Berlin's Restaurant Supply, Johnston Signs, Welch's Seafood and Exchange Factor thrift store, among many others. Area 3 neighborhoods include Environmental Justice communities that are expected to be adversely impacted by the I-526 LCC WEST project. Any potential impacts to these Environmental Justice communities need to be evaluated thoroughly to ensure that fair and just outreach opportunities are provided to the residents living there. The EJ Analysis in DEIS Appendix G details the Area 9 neighborhoods in a process for NEPA projects set forth in the Federal Highway Administration (FHWA) Guidance on Environmental Justice and NEPA (2011).

### ***Population and Housing***

The houses in Area 3 were built between 1945 and 2017, with the average being built around 2002. On average, these houses were constructed on approximately 0.19-acre lots and the appraisal estimate for residential housing is \$31,127. The houses in Highland Terrace and Liberty Park are primarily single-family, single story homes, and vary between brick, concrete and vinyl building materials. There are also a few multi-family homes in Liberty Park near I-526. Russelldale has both single-family and multi-family units (duplexes and small apartment complexes). Ferndale has multiple mobile home communities, single-family units and apartment complexes (Photograph 8) within the neighborhood. Within all four neighborhoods, overall, the trees are larger in backyards and sparse in front yards.



*Photograph 8: Multi-family apartment unit example in the Area 3 neighborhoods*

*SOURCE: Google Street View.*

### ***Community Services and Facilities***

Area 3 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Matilda Dunston Elementary School, North Charleston Elementary School, North Charleston Creative Arts Elementary School, Northwoods Middle School and Morningside Middle School, and North Charleston High School. Within each neighborhood is a community center that provides recreational facilities, after school care, and other event space for the community to utilize throughout the year. There are also at least five churches within this area.

### ***Mobility and Accessibility***

The Area 3 neighborhoods have sidewalks that run along Piedmont Avenue, Rebecca Street, James Bell Drive, and Taylor Street, among others. According to the I-526 Lowcountry Corridor WEST Community Advisory Council (CAC), sidewalks in these neighborhoods are ill-maintained and can be difficult for those who require the use of a wheelchair to use<sup>13</sup>. The CAC also noted that the sidewalks in this area are flat, without a curb or gutter, which has led to residents and visitors occasionally parking vehicles on the sidewalks, blocking access for pedestrians or bicyclists. The sidewalks in Area 3 help provide connectivity to community facilities such as Russelldale Community Center, Highland Terrace-Liberty Park Community Center, and the Biblical House of God. Additional footpaths along Filbin Creek and Deacon Street can also be viewed from aerial GIS mapping and are depicted in Photographs 4 and 5. Multiple bus stops are located along Rivers Avenue and provide transit connectivity for residents in Area 3.

## **3.1.7.4 Area 4: Morningside, Liberty Hill, Oak Terrace Preserve, Cameron Terrace West**

Area 4 includes the neighborhoods of Morningside, Liberty Hill, Oak Terrace Preserve, and Cameron Terrace West (Block Group: 33004, 35003). These neighborhoods are located south of I-526 and east of I-26, between the Ferndale and Park Circle communities. Although primarily residential, these neighborhoods also house multiple schools and recreation centers.

### ***Population and Housing***

The houses in Area 4 were built between 1942 and 2019, with the average being built around 2002. On average, these houses were constructed on approximately 0.17-acre lots and the appraisal estimate for residential housing is \$110,599. This number reflects the results of the gentrification phenomena impacting this once low-income area. Of the 621 parcels surveyed for this CIA, 363 of them are valued at under \$100,000, while 258 are valued much higher, ranging up to \$300,000. As gentrification becomes more prevalent in these neighborhoods, it can be assumed that the average home appraisal will also increase. The Oak Terrace Preserve neighborhood is split, with the majority of houses being newer, multi-story single-family homes with bright or colorful Hardie Board/fiber cement siding (Photograph 9) and a smaller number are older, single story, single-family brick houses (Photograph 10). These older properties are currently being bought by developers to continue transforming the entirety of Oak Terrace Preserve into higher valued homes and properties. Further out, on the outskirts of Oak Terrace Preserve lies Cameron Terrace West, Liberty Hill and Morningside. These neighborhoods display the older, single-family homes made from brick, vinyl, or concrete that have historically been very common in this area.

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<sup>13</sup> I-526 Lowcountry Corridor Community Advisory Council Meeting No. 6, Meeting Minutes. March 7, 2020.



*Photograph 9: Example of multi-story, single-family homes being built in Oak Terrace Preserve*  
 SOURCE: Google Street View.



*Photograph 10: Example of the older, single-story, single-family homes in Oak Terrace Preserve*  
 SOURCE: Google Street View

### **Community Services and Facilities**

Area 4 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Malcolm C Hursey Elementary School, North Charleston Elementary School, North Charleston Creative Arts Elementary School, Morningside Middle School, and North Charleston High School. There are four additional educational facilities, five religious centers, one community center and multiple parks throughout Area 4.

### **Mobility and Accessibility**

The neighborhoods in Area 4 have sidewalks that run along Spruce Street, Gaynor Street, and follow each loop in the Oak Terrace Preserve neighborhood. In many areas of these neighborhoods, sidewalks can be found on both sides of the street, such as those on each side of East Liberty Park Circle and Celtic Drive. These sidewalks have curbs and in many places are offset from the road by at least 10 feet. Sidewalks in Area 4 provide connectivity to many community facilities including multiple pocket parks, North Charleston Creative Arts Elementary School, St. Andrew’s Church, the Academic Magnet High School, and the Danny Jones Athletic Complex. Multiple bus stops are located along Montague Avenue throughout Area 4.

### **3.1.7.5 Area 5: Park Circle, Oak Park, Cameron Terrace, Cameron Terrace Manor, Palmetto Gardens**

Area 5 includes the neighborhoods of Park Circle, Oak Park, Cameron Terrace, Cameron Terrace Manor, and Palmetto Gardens (Block Groups 35001 and 35002). These neighborhoods are located south of I-526 and east of I-26, at far end of the CIA study area, closer to the Cooper River. Although primarily residential, these neighborhoods also include restaurants, parks, and community centers, making Area 5 an ideal spot for continued gentrification and an increase in housing demand.

### **Population and Housing**

The houses in Area 5 were built between 1955 and 2019, with the average being built around 2006. On average, these houses were constructed on approximately 0.23-acre lots and the appraisal estimate for residential housing is \$132,855. This number reflects the results of the gentrification phenomena impacting this once low-income area. The easily accessible parks, restaurants, and other facilities make the Park Circle

neighborhood a popular place to live, thus increasing home values. The majority of houses are older, single-story, single-family brick or vinyl sided houses (Photograph 11).



*Photograph 11: Example of the original home types built in the Park Circle neighborhood*  
*SOURCE: Google Street View.*

### **Community Services and Facilities**

Area 5 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Hursey Elementary School, North Charleston Elementary School, Morningside Middle School, and North Charleston High School. There are two educational facilities, ten religious centers, three community centers and multiple parks throughout Area 5.

### **Mobility and Accessibility**

The neighborhoods in Area 5 have sidewalks that run along North Rhett Avenue, Durant Avenue, Parkside Drive and Potomac Street, among others. These sidewalks help provide connectivity to community facilities such as North Charleston High School, Felix C. Davis Community Center and Park Circle park facilities that are located in the center of the neighborhood. There are no curbs on the sidewalks in Area 5. Multiple bus stops are located along Rhett Avenue and Montague Avenue throughout Area 5.

### **3.1.7.6 Area 6: Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge 2, Firestone Road**

Area 6 includes the neighborhoods of Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge 2, and homes on Firestone Road (Block Groups 31114 and 31113). These neighborhoods are primarily located east of I-526, north of Dorchester Road. These neighborhoods are residential, but boarder commercial businesses such as Dollar General, First Citizens Bank, and an ABC Store on Dorchester Road.

The Ashley River Scenic Corridor Overlay District, which is described in Section 3.1.2 as an intentional buffer to helps protect the visual aesthetics of the historic plantations on the west side of the Ashley River, intersects Area 6. Because the overlay district is not within the project footprint, it is not anticipated to be directly impacted by the I-526 LLC WEST project. Firestone Road is lined with a combination of residential and commercial properties plus undeveloped/vacant parcels. These neighborhoods have low income residents and were bisected by the construction of the original I-526.



### **Population and Housing**

The houses in Area 6 were built between 1964 and 2019, with the average being built around 2005. On average, these houses were constructed on approximately 0.18-acre lots and the appraisal estimate for residential housing is \$78,166. The majority of houses are single-family brick or vinyl sided houses (Photograph 12) but there are also multiple apartment complexes and duplexes for multi-family housing within this area (Photograph 13). All multifamily housing is located within Oak Ridge 2 which is in the center of Area 6.



*Photograph 12: Example of the duplexes located in the Oak Ridge 2 neighborhood*  
*SOURCE: Google Street View.*



*Photograph 13: Single-family house that is characteristic of those in the Area 6 neighborhoods*  
*SOURCE: Google Street View.*

### **Community Services and Facilities**

Area 6 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Meeting Street at Brentwood Elementary School, Northwoods Middle School, Stall High School, and North Charleston High School. There are no readily accessible parks and few community services in Area 6.

### **Mobility and Accessibility**

The Area 6 neighborhoods have sidewalks located on Marilyn Drive, Westview Street, and part of Marginal Street and Oakridge Drive. These sidewalks provide sporadic neighborhood connectivity. Multiple bus stops are located along Rhett Avenue and Montague Avenue allowing for transit connectivity for residents in Area 6.

## **3.1.7.7 Area 7: Wando Woods**

Area 7 includes the Wando Woods neighborhood (Block Groups 39001 and 39002). These neighborhoods are located west of I-526 and south of Dorchester Road, just east of the Ashley River and south of the railroad tracks. Although primarily residential, these neighborhoods border commercial properties such as Low Country Harley Davidson and the Charleston Metro Chamber of Commerce.

### **Population and Housing**

The houses in Area 7 were built between 1946 and 2017, with the average being built around 2003. On average, these houses were constructed on approximately 0.44-acre lots and the appraisal estimate for residential housing is \$141,535. These averages do not reflect the major income disparity between residents living on the river and those living further inland. Home values range from \$10,000 (0.08 acre lot near I-526

with a single-family home) to \$948,000 (0.5 acre lot on the Ashley River with a multi-story single-family home) (Photograph 14) in the Wando Woods neighborhood. The majority of houses in this area are single-story, single-family brick or vinyl sided houses (Photograph 15) There are also approximately three mobile home communities within Area 7.



*Photograph 14: Single-family house on the Ashley River*  
*SOURCE: Google Street View.*



*Photograph 15: Example of a home further inland in Area 7*  
*SOURCE: Google Street View.*

### **Community Services and Facilities**

Area 7 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Meeting Street at Brentwood Elementary School, Zucker Middle School, and North Charleston High School. There are two educational facilities (College of North Charleston and Limestone College), four religious centers (one of which is Spanish speaking), and one community center throughout Area 7.

### **Mobility and Accessibility**

The Area 7 neighborhoods have sidewalks that run along Paramount Drive and Bonnie Marie Way. Paramount Drive spans the entire length of the Wando Woods neighborhood, providing some connectivity to community facilities such as Miner Crosby Community Center and Wando Woods Baptist Church. There are minimal sidewalks on the smaller streets branching off from Paramount Drive. There are two bus stops located near Area 7, one on Paramount Drive and one on Dorchester Road.

### **3.1.7.8 Area 8: Plantation Isles, Reverie on the Ashley**

Area 8 includes the neighborhoods of Plantation Isles and Reverie on the Ashley (Block Group 39002). This area is located on the North Charleston side of the Ashley River, just west of I-526. These neighborhoods are strictly residential, and their residents display high levels of income with private docks, extravagant homes/condominiums, and large boats.

### **Population and Housing**

The houses in Area 8 were built between 1999 and 2015, with the average being built around 2008. On average, these houses were constructed on approximately 0.51-acre lots and the appraisal estimate for residential housing is \$586,503. The majority of houses in the Plantation Isles neighborhood are multistory, single-family Hardie Board or cement plank sided houses (Photograph 16). The Reverie on the Ashley

neighborhood is primarily made up of multi-family condominiums, which, according to their website, start at the low \$500,000 (Photograph 17). Landscaping within both neighborhoods is immaculate, with freshly planted shrubs and carefully maintained lawns.



Photograph 16: Multi-story homes in Plantation Isles  
SOURCE: Plantation Isles



Photograph 17: The Reverie on the Ashley  
SOURCE: The Reverie on the Ashley

### **Community Services and Facilities**

Area 8 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Meeting Street at Brentwood Elementary School, Meeting Street at Burns Elementary School, Northwoods Middle School, and North Charleston High School. There are no public community centers or facilities in these areas, but the Reverie on the Ashley offers residents a pool, clubhouse, nature trails and a boat slip for use.

### **Mobility and Accessibility**

The only sidewalks in these neighborhoods are those at the Reverie on the Ashley luxury condominiums, which provide connectivity for residents to access to a 40-slip private marina. There are no available transit stops in this area, so residents likely use single-family vehicles to navigate in and out of their neighborhood.

### **3.1.7.9 Area 9: West Ada Ave, East Ada Ave, Highpoint Road**

Area 9 includes the houses along West Ada Avenue, East Ada Avenue, and Highpoint Road (Block Group 39002). This area is located on the North Charleston side of the Ashley River, on both sides of I-526. These homes are technically considered part of the Wando Woods neighborhood (Area 7), but because of the physical separation and varying impacts on West Ada Avenue and East Ada Street, this area will be discussed separately. Area 9 is surrounded by commercial businesses such as OL Thompson Construction and Harley Davidson, and due to the high percentage of low-income and minority residents, these homes can be classified as an Environmental Justice neighborhood. Area 9 neighborhoods include Environmental Justice communities that are expected to be impacted by the I-526 LCC WEST project. Any potential impacts to these Environmental Justice communities need to be evaluated thoroughly to ensure that fair and just outreach opportunities are provided to the residents living there. The EJ Analysis in DEIS Appendix G details the Area 9 neighborhoods in a process for NEPA projects set forth in the Federal Highway Administration (FHWA) Guidance on Environmental Justice and NEPA (2011).

### ***Population and Housing***

The houses in Area 9 were built between 1946 and 2016, with the average being built around 1996. On average, these houses were constructed on approximately 0.2-acre lots and the appraisal estimate for residential housing is \$39,800. The majority of houses along West Ada Avenue, East Ada Avenue, Highpoint Road are small, single-story, single-family homes with overgrown yards and unpaved or deteriorating driveways (Photograph 18). Most homes are brick or vinyl sided with chain linked fence on the edge of many properties. West Ada Avenue and East Ada Avenue were bisected by the original construction of I-526, and therefore no longer physically connect. By splitting this small neighborhood in half, I-526 disrupted community cohesion and the overall connectivity in this area. Any potential impacts to these Environmental Justice communities need to be evaluated thoroughly to ensure that fair and just outreach opportunities are provided to the residents living there.



*Photograph 18: Example of single-family homes located on West Ada Avenue.*  
*SOURCE: Google Street View.*

### ***Community Services and Facilities***

Area 9 neighborhoods are located within the City of North Charleston, in Charleston County. These neighborhoods use Meeting Street at Brentwood, Northwoods Middle School, Zucker Middle School, and North Charleston High School. There is one public community center near this area (Miner Crosby Community Center), and multiple community facilities including the North Campus of the College of Charleston, the Charleston County Volunteer Rescue Squad Headquarters, Joshua Baptist Church, and the Kingdom Impact Community church are nearby.

### ***Mobility and Accessibility***

There are no sidewalks in Area 9, but directly north sidewalks run along Paramount Drive, providing these residents with some connectivity to Miner Crosby Community Center and Kingdom Impact Community church. There are no visible footpaths from aerial GIS mapping in Area 9, but many of the driveways were either ill-maintained or never paved, so dirt vehicle paths are prevalent in the place of concrete or asphalt driveways. There are three available bus stops in this area along Dorchester Road and Paramount Drive.

#### **3.1.7.10 Area 10: Brentwood, Waylyn**

Area 10 includes the neighborhoods of Brentwood and Waylyn (Block Groups 38001, 38002, and 38003). This area is located east of I-526 and west of I-26, just south of the railroad tracks. Although primarily

residential, these neighborhoods border commercial properties on Dorchester Road, such as Wells Fargo Bank, Marvin's Seafood and Gerald's Tires and Brakes.

### ***Population and Housing***

The houses in Area 10 were built between 1946 and 2017, with the average being built around 2002. On average, these houses were constructed on approximately 0.18-acre lots and the appraisal estimate for residential housing is \$41,978. The majority of houses in this area are single-story, single-family brick, or vinyl sided houses (Photograph 19). Tree growth is present in the front and backyards of homes in this area, but overall maintenance is lacking in many of the residential front yards.



*Photograph 19: Example of two types of ranch style homes in the Brentwood neighborhood*  
*SOURCE: Google Street View.*

### ***Community Services and Facilities***

Area 10 neighborhoods are located within the City of North Charleston in Charleston County. These neighborhoods use Meeting Street at Brentwood Elementary School, Meeting Street at Burns Elementary School, Northwoods Middle School, and North Charleston High School. There are three educational facilities, eight religious centers, and one community center throughout Area 10.

### ***Mobility and Accessibility***

The Area 10 neighborhoods have multiple sidewalks that run along Leeds Avenue, Lilac Avenue, Primrose Avenue, Louis Drive, and Ranger Drive, among others. These sidewalks provide residents with adequate connectivity to community facilities such as the Jeanene Batten Community Center and Meeting Street at Brentwood Elementary School. Similar to the sidewalks in Area 3, the sidewalks in Area 10 are flat, without a curb or gutter. Vehicles can be viewed on Google Street View parked on the sidewalks in this area, leading to a decrease in overall connectivity. Multiple bus stops are located along Leeds Avenue, Martha Drive, Dorchester Road, and Constitution Avenue throughout Area 10.

### **3.1.7.11 Area 11: Centre Pointe**

Area 11 includes the Centre Pointe Apartment complex (Block Group 31111). This area is located directly east of I-526 and west of I-26. Because Area 11 is isolated, located in a commercial area, and not qualified as an EJ community, it is not similar enough to be described with the Area 3 or Area 6 neighborhoods. The Tanger Outlets shopping complex is located directly east of Area 11.



Photograph 20: Centre Pointe Apartments  
SOURCE: Center Point Apartments.

### **Population and Housing**

The Centre Pointe Apartment complex was built in 2016. Despite its location near the busy interstate and airport, Centre Pointe Apartments are luxury style apartments with rent rates ranging from \$1,200/month for a 1-bedroom/1-bathroom apartment to \$2,000/month for a 3-bedroom/2-bathroom apartment. The Centre Pointe Apartment complex has a brick and concrete façade (Photograph 20) and is professionally maintained by apartment management and lawn care staff.

### **Community Services and Facilities**

Area 11 neighborhoods are located within the City of North Charleston in Charleston County. These residents use Meeting Street at Brentwood Elementary School, Northwoods Middle School, and North Charleston High School. There are no public community centers or facilities in Area 11, but the Centre Pointe complex offers residents a swimming pool, fitness center, spa area, pet park, and car wash, among other complex amenities.

### **Mobility and Accessibility**

The Area 11 residents have access to sidewalks around their apartment complex buildings and to those that run along Wetland Crossing Road. These sidewalks provide residents with connectivity to commercial businesses and restaurants such as Dollar Tree, South State Bank and the Tanger Outlets shopping mall. The sidewalks in Area 11 include a curb and gutter which serves to elevate the sidewalks away from the road and creates efficient stormwater drainage opportunities. Multiple bus stops are located along Centre Pointe Drive, but there are none that are directly found within Area 11. Residents likely walk to Centre Pointe Drive for transit facilities or use single-family vehicles to navigate in and out of their apartment complex.

### **3.1.7.12 Area 12: Camps**

Area 12 includes the Camps neighborhood and the homes on Ozark Street and Seiberling Road (Block Groups 31111). This neighborhood is located east and west of I-526, south and north of Montague Avenue. This area is primarily commercial and industrial with the homes tucked back behind businesses such as Silmar Electronics and Physicians Footcare. These homes have low income populations and were bisected by the construction of the original I-526. Area 12 homes include Environmental Justice communities that are expected to be impacted by the I-526 LCC WEST project. Any potential impacts to these Environmental Justice communities need to be evaluated thoroughly to ensure that fair and just outreach opportunities are provided to the residents living there. The EJ Analysis in DEIS Appendix G details the Area 9 neighborhoods in a process for NEPA projects set forth in the Federal Highway Administration (FHWA) Guidance on Environmental Justice and NEPA (2011).

### **Population and Housing**

The houses in Area 12 were built between 2007 and 2016, with the average being built around 2013. On average, these houses were constructed on approximately 0.30-acre lots. The majority of houses are multi-family brick apartments (Photograph 21) with minimal landscaping.

### Community Services and Facilities

Area 12 homes are located within the City of North Charleston, in Charleston County. These neighborhoods use Meeting Street at Brentwood Elementary School, Northwoods Middle School, and North Charleston High School. There are no readily accessible public parks Area 12; however, the World Harvest Community Church is located near the homes on Ozark Street. This church owns a property with a large field for recreational activities, including a volleyball court.



Photograph 21: Example of the duplexes located on Ozark Street  
SOURCE: Google Street View.

### Mobility and Accessibility

The Area 12 homes have sidewalks located on Montague Avenue, but none within the neighborhood. The closest bus stop is 0.3 miles away on Montague Avenue, which is the only transit connectivity for residents in Area 12.

## 3.2 WEST ASHLEY

### 3.2.1 History

West Ashley is not its own municipality, but one of six incorporated areas of the City of Charleston. Its name derives from its location west of the Ashley River, and it is the largest and most populated of the suburbs with 62,000 residents over 44 square miles.

The Charles Towne Landing event in 1670 marked the Carolinas first permanent English settlement and is considered to be the founding of Charleston, however, annexation by the modern day City of Charleston did not occur until the 1960's. West Ashley remained primarily agrarian for centuries, with many of the historic plantations still standing today – including Middleton Place, Magnolia Gardens and Drayton Hall (Photograph 22). The Middleton family used slave labor from 1738 to 1865 to run their plantations and with up to 3,000 enslaved people in their possession were some of Charleston's largest slaveholders. In the late 1800s, Dupont Crossing, near what is now known as Wappoo Road and U.S. Highway 17, was the main hub for economic and commercial activity in the area. Government buildings, produce/vegetable markets, and railroads met at Dupont Crossing, while the majority of surrounding land continued to be used for farming or phosphate mining. In the 1880s, the land that is now West Ashley was subdivided and sold to freedmen, becoming the historically black neighborhoods of Ashleyville and Maryville. Similar to those who established the Liberty Hill neighborhood, the residents in Ashleyville and Maryville likely stayed in the south throughout

Photograph 22: Drayton Hall Plantation (built 1747-1752)  
SOURCE: [charlestonmuseum.org](http://charlestonmuseum.org)



and after the Civil War because of their community ties, familial bonds, economic opportunities or fear of the unknown circumstances in the north.

The post-World War II period gave this area its first taste of residential growth as more middle-class families relocated into the suburbs after soldiers returned from overseas. Builders began constructing homes in subdivisions such as the now historic Avondale and Windermere neighborhoods. As the 1940s began, so did commercial development with the South Windermere Shopping Center – the oldest shopping center in South Carolina. This commercial development trend continued into the 1960s and 1970s as corridors became lined with shopping centers. This high-density growth was not well supported by existing infrastructure, therefore I-526 was built in the 1980s in order to quickly increase the overall regional connectivity between the peninsula and West Ashley. The resulting increase in connectivity spurred the construction of the Citadel Mall, multiple neighborhoods, and eventually the Glenn McConnell Parkway in the 1990s. Medical University of South Carolina Health West Campus and the Cultural Arts Center of Charleston are also now located inside the mall.

With the new east to west corridor, development of the West Ashley area has since progressed west. Up until 2000, most growth in West Ashley occurred east of I-526, but in recent years areas west of I-526, have begun to grow as more affluent residents flock to the larger parcels and newer housing found there. Today, West Ashley is one of the more popular suburbs of Charleston, known for its neighborhoods, parks, and active community.

Situated in between two rivers, the Ashley River and Stono River, West Ashley and the overall Charleston area has increasingly become more prone to flooding issues over the last decade. Charleston set a record in 2019 by spending 89 days in a flooded state, which is almost one out of every four days in the calendar year. The challenges associated with sea level rise, such as flooding and stormwater drainage, were some of the main topics discussed during the 2019 local officials' election. The Charleston City Council updated the Flooding and Sea Level Rise Strategy in 2019 to combat the challenges that will likely arise as flooding problems continue to impact residents in the Charleston area.



## 3.2.2 Land Use

**Area Plans** – The proposed I-526 LCC WEST project segment from the Ashley River to Paul Cantrell Boulevard is located within the district of West Ashley, the City of Charleston, Charleston County, the St. Andrews Public Service District (PSD), and the BCDCOG. Each of these entities have planning documents to help guide the growth of the overall Charleston area, then the BCDCOG incorporates the land use recommendations and goals from each local entity into the Charleston Area Transportation Study (CHATS) Long Range Transportation Plan (LRTP). The proposed I-526 LCC WEST project’s compatibility with these planning documents was evaluated based on a comparison of environmental consequences on existing and future land use plans (see Section 5.1). The following documents are referenced while discussing existing and future land use plans in the West Ashley project area:

### 2010 Century V City Plan

- A comprehensive plan that serves to guide City of Charleston officials on transportation and planning efforts into 2025. It outlines land use, future goals, economic development and cultural resources, among other topics.

### 2017 Plan West Ashley

- A document that helps lay the foundation for the development of the West Ashley area with a focus on preserving the historic, cultural and natural environments. The five goals outlined in the plan include upgrading community design and land use, connecting transportation modes, creating resilient infrastructure and sustainability, focusing on affordable housing, and cultivating economic development.

### 2018 Charleston City Transportation Plan

- A transportation plan created to help the City of Charleston strategize future development as each district faces explosive growth. Guiding principles for this plan include keeping the community engaged with the process, connecting the city by improving existing connection points and recommending new crossings, creating better routes for every mode of transportation, ensuring reliability and ease throughout the transportation network and protecting investments for past and future residents.

### 2018 Charleston County Comprehensive Plan

- A plan to establish strategies for Charleston County to maintain and enhance plans outlined in previous comprehensive reviews. This plan emphasizes the importance of rural preservation, fiscal responsibility, providing a more detailed review for growing areas, interagency coordination, and growing within the Urban Growth Boundary.

### Charleston Area Transportation Study (CHATS) Long Range Transportation Plan (LRTP)

- The LRTP provides contextual background for and addresses the issues and concerns identified by the public through extensive public involvement efforts and from data collected on crashes, congestion and other transportation related problems impacting Berkeley, Charleston, and Dorchester Counties.

**Methodology** – The I-526 LCC WEST project team used data from the previously listed transportation and comprehensive plans to analyze land use in West Ashley. The West Ashley portion of the CIA study area is south of the Ashley River. Geographic information system (GIS) data was verified by conducting field surveys and reviewing digital aerial mapping of the CIA study area. The CIA study area approach is discussed in Section 2.1.

**Existing Conditions** – West Ashley is primarily suburban in character, with job centers concentrated along major roads like US-17, Ashley River Road, and Sam Rittenberg Boulevard. 35% of existing zoning is single family residential with only about 7% reserved for general commercial business. Land use plans for this area are outlined

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in the 2017 Plan West Ashley document, which most often defines West Ashley characteristics in terms of outer West Ashley, which lies west of I-526, and inner West Ashley, which lies east of I-526.

Inner West Ashley includes historic neighborhoods dating back to the 17th century. Most of its land is dedicated to suburban residential uses with some urban and special districts along major transportation corridors such as US 17. Because of its proximity to downtown Charleston, inner West Ashley is becoming an increasingly popular place to live. Those who move there are looking for a suburban lifestyle with a separation from the hustle of downtown Charleston. This has caused an increase in housing prices and a trend of gentrification, especially in many of the historically affordable neighborhoods in inner West Ashley.

The majority of land in outer West Ashley is also mainly suburban residential in use. According to the City of Charleston Century V Comprehensive Plan, planners have zoned the West Ashley Circle and areas within the future Long Savannah development as urban land use “intended to be neighborhoods centers in the future.” According to the 2018 Charleston County Comprehensive Plan, West Ashley is also within the Urban Growth Boundary for Charleston County, the goal of which, is to appropriately manage higher intensity growth within the boundary. Zoning for West Ashley, shown in Figure 3.8, is generally a mix of residential and commercial uses and reflects current land uses.

Immediately south of the Ashley River, I-526 is bordered by residential development, which is denoted as “Suburban Edge” zoning. Continuing further south on I-526, land use transitions into higher density residential development on the east side of I-526, denoted as “Suburban” zoning, and commercial uses on the west side of I-526, denoted as “Highway” zoning. Highway zoning is indicative of auto-intensive commercial uses. Magwood Drive is flanked by a number of regional destinations for medical care including the West Ashley Medical Center, Essex Medical Park, and NHC Healthcare Charleston as well as commercial destinations that include a large number of retail shops and restaurants. Land uses south of Glenn McConnell Parkway/Paul Cantrell Boulevard are similar to those along Magwood Drive, including the Bon Secours St. Francis Hospital and associated facilities plus retail shops and restaurants.

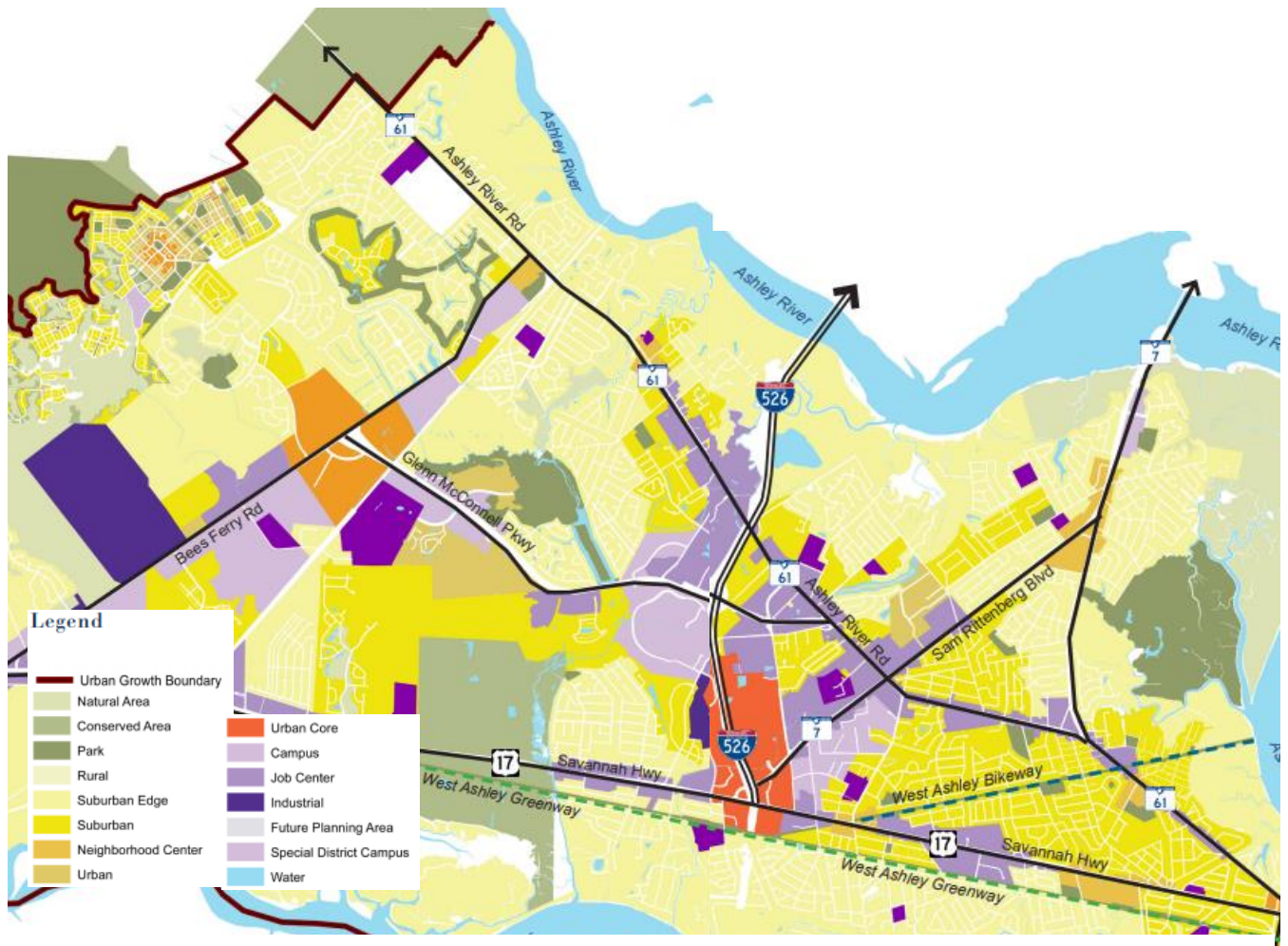


Figure 3.8: Existing West Ashley Land Use (2018)  
 Source: Plan West Ashley, City of Charleston, SC  
<https://www.charleston-sc.gov/1527/Plan-West-Ashley-Master-Plan>

### 3.2.3 Population and Housing

As one of the largest suburbs of Charleston, West Ashley accounts for about half of the city’s 120,000 residents and its overall population has grown by about 17% since 2000. Within the CIA study area, its population is 13,214 and is comprised of 29% African American, 67% Caucasian, and 4% Hispanic individuals. Demographic data for West Ashley is contained in Appendix A.

Median household incomes in outer West Ashley were 35% higher than inner West Ashley as of the 2011-2015 period and the average household income is about \$51,438 (which is about \$17,000 higher than the average in North Charleston). The overall inner West Ashley rent increased by 40% and the outer West Ashley rent increased by 28% from 2011 to 2016. These differences are significant as they play a key role in the demographic makeup of each area. Charleston has experienced a regional economic boom in recent years, which has attracted many people to the desirably adjacent suburb of West Ashley. As a result, home prices have increased, as evidenced by many of the single-story brick homes built in the 1960’s valuing around \$200,000.

Renting is becoming more attractive for Baby Boomers (individuals born between 1944 and 1964) and Millennials (individuals born between 1981 and 1996), two of the larger generational groups that are looking for housing.

Baby Boomers are heading into retirement looking for smaller apartments or townhomes that have easier upkeep. Millennials are also looking to rent due to the flexibility and historically affordable options that rentals provide. The larger demand in turn increases rental prices, making West Ashley less affordable as demand increases.

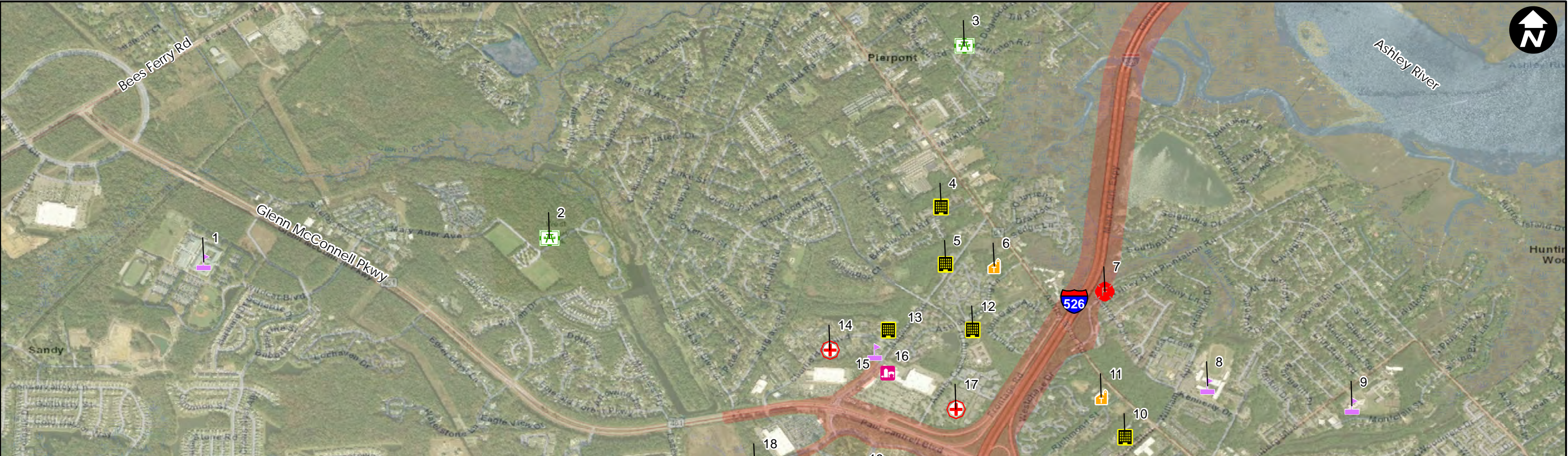
According to *2017 Plan West Ashley*, inner West Ashley has historically housed a larger concentration of African American residents within neighborhoods such as those on Richmond Street and Able Street, east of I-526. The rising cost of housing threatens neighborhood diversity because higher property taxes and housing prices may force low-income, and historically minority, families from their homes through gentrification. Affordable housing in West Ashley is becoming less common as older residents have begun to sell their properties instead of continuing to rent them out. This issue is amplified by solicitors looking to purchase homes from those residents who do not understand or know their rights or the monetary value of their homes. Gentrification and losing the overall character of current neighborhoods is becoming more of a fear for longtime residents as the inner West Ashley neighborhoods face these transitions.

The minority population percentage of the CIA study area varies considerably and ranges anywhere from 7% in Block Group 26133 (which is in outer West Ashley) to 53% in Block Group 26121 (which is in inner West Ashley). This is consistent as the historically minority neighborhoods are located in inner West Ashley. Population data sorted by race can be studied in detail in Table A.8 in Appendix A. The percentage of households over 65 in the Block Group neighborhoods ranges from the lowest percentage in Block Group 26121 (7%) to the highest in Block Groups 26133 and 26134 (24%). At 7%, Block Group 26142 has the lowest percentage of households with children under 18 and at 32% Block Group 26141 has the most. Households with a Limited English Proficiency ranges from 0% (4 of the Block Groups) to the highest percentage in Block Group 26134 and 26141 at 2.2% and 2.5% respectively.

Depending on neighborhood and location, the type of housing in West Ashley can vary. The gated Ashley Harbor neighborhood (Block Group 26121) houses high-income residents, with single-family, multi-story homes that are located on the water. Many of these homes have pools or docks with boating capabilities. Other homes in West Ashley tend to be smaller, single-family, have brick or vinyl siding, and moderate sized backyards. There are also at least 15 apartment complexes (affordable and luxury) and five assisted living facilities (Figure 3.9) within the CIA study area. The only mobile homes found in the CIA study area are the Beechwood mobile homes, which are within Block Group 26134, along Beechwood Road between Ashley River Road and Ashley Crossing Drive, outside the area of potential impact from the proposed project.

The median home values in West Ashley CIA study area vary substantially. On the lower end of the range are homes located in Block Group 26142 for an average of \$165,500. The homes on the upper end of the median value range in Block Group 26121 (which encompasses the Ashley Harbor neighborhood) is approximately \$387,100 (with waterfront homes peaking in the \$2 million range). Home appraisal values in the West Ashley portion of the CIA study area are shown in Figure 3.10. The average home in West Ashley was built in 2004, with a steady number of houses either under construction now or recently built.

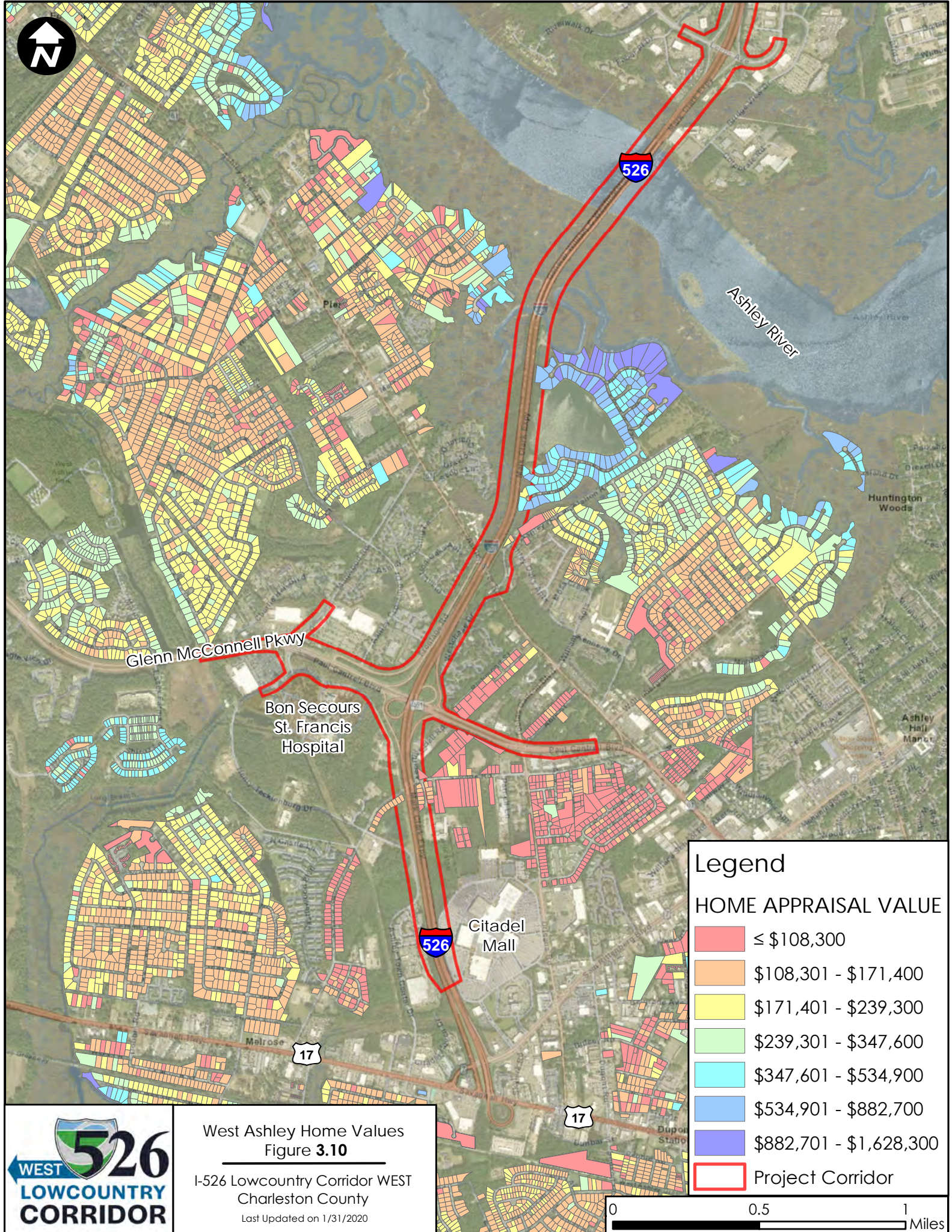
Block Group 26134, which contains a majority of apartments and townhomes, has a notable 89% of residences that are renter occupied, while only 11% are owner occupied. On the other hand, Block Group 26133 has 86% of the homes occupied by their owners, while 14% are rented out. Vacancy rates are fairly similar across the board, with none over 15%. In fact, four of the Block Groups (56003, 26112, 26122, 26142) have 0% vacancy. Overall, most people do have access to at least one vehicle for transportation purposes, which is supported by data that shows every Block Group falling below the 3% mark for households that do not have access to a vehicle.



Legend			
	Project Corridor		Senior Facility
	Fire		Schools
	Library		Worship Facility
	Medical Facility		Grocery Store
	Recreational Facility		

1 West Ashley High School	20 Waring Senior Center
2 West Ashley Park	21 St Peter's Church
3 Dogwood Park	22 Charleston Baptist Church
4 Ashley River Plantation	23 Iglesia Luz de Cristo
5 Grandview Apartments	24 Bible Way Baptist Church
6 St Andrew's Mission Church	25 Willie Gaines Park
7 Charleston Fire Dept Station 16	26 Cynthia Graham Hurd / St. Andrew's
8 West Ashley Advanced Studies Magnet	27 St. Andrews Fire Dept Station 1
9 Addlestone Hebrew Academy	28 Ashley River Creative Arts Elementary
10 Ashley Park	29 City Church of Charleston
11 Salvation Army	30 Open Arms Child Care
12 The Palmettos of Charleston	31 Audacity Creative Ares Preschool
13 Brookdale West Ashley	32 Carolina Voyager Charter School
14 MUSC Health	33 Orange Grove Charter School
15 Food Lion	34 Oakland Elementary School
16 Cadence Academy Preschool	35 Essex Village Church of Christ
17 West Ashley Medical Center	36 St Andrews Fire Dept Station 2
18 Ashley Gardens Assisted Living	37 Charleston Seventh-day Adventist School
19 Bon Secours St Francis Hospital	38 Charleston Seventh-day Adventist Church

Community Features - West Ashley  
 Figure 3.9  
 I-526 Lowcountry Corridor WEST  
 Charleston County  
 Last Updated on 3/6/20



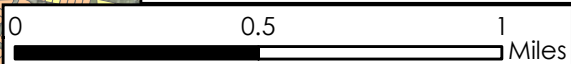
**Legend**

**HOME APPRAISAL VALUE**

- ≤ \$108,300
- \$108,301 - \$171,400
- \$171,401 - \$239,300
- \$239,301 - \$347,600
- \$347,601 - \$534,900
- \$534,901 - \$882,700
- \$882,701 - \$1,628,300
- Project Corridor



West Ashley Home Values  
**Figure 3.10**  
 I-526 Lowcountry Corridor WEST  
 Charleston County  
 Last Updated on 1/31/2020



### 3.2.4 Community Services and Facilities

Community features and services within the West Ashley portion of the CIA study area are shown in Figure 3.9 and discussed below.

Library services for West Ashley are provided by Charleston County Public with local branches at the West Ashley Library, located at 45 Windermere Boulevard, and the Cynthia Graham Hurd/St. Andrew's Regional Library, located at 1735 N Woodmere Drive, and a planned branch on Bees Ferry Road. These libraries host featured programs such as gardening classes, and other family-friendly events such as West Ashley Library's "Non-Electronic Game Day" or their "Not Fiction Book Discussion" in January 2019.

Healthcare services in West Ashley are provided by the Medical University of South Carolina, Bon Secours St. Francis Hospital, Roper St. Francis Health Care, and Health First. The Charleston County Emergency Medical Service Department provides emergency medical services. The West Ashley CIA study area has five fire stations, two operated by West Ashley and three operated by St. Andrews. The closest available police station is located across the Ashley River in the City of Charleston.

West Ashley's public schools are served by Charleston County School District 10. Private schools in the CIA study area include Addlestone Hebrew Academy located at 1675 Raoul Wallenberg Boulevard and Cadence Academy Preschool at 1966 Magwood Drive. There are seven elementary schools, two middle schools, one high school, and two charter schools in West Ashley. The main schools that serve communities within the CIA study area include the following: Oakland Elementary School, Springfield Elementary School, Stono Park Elementary School, West Ashley High School and West Ashley Advanced Studies Magnet (West Ashley Middle School).

Religious facilities in the CIA study area include churches, synagogues, and churches with services in Spanish. There are many religious facilities located in West Ashley, with approximately 19 located within the CIA study area. Notably, Charleston Baptist Church provides many community engagement opportunities such as support groups, preschool, basketball leagues, craft nights and bible studies. They also run a food pantry for residents of the West Ashley area. The Congregation Dor Tikvah is also very active in the community as they host meals and book clubs, provide volunteer opportunities at the Lowcountry Food Bank and provide a children's library for the local Jewish community.

Although West Ashley does not have community centers available for individual neighborhoods, there are various parks and facilities for recreation. Bees Landing Recreation Center is a 25-acre public park that features athletic fields, fitness classes, special events, and summer camps among other amenities. Charles Towne Landing State Historic Site is a state park that includes six miles of trails, 80 acres of gardens, and a natural habitat zoo. The park hosts many events including literacy education events for children. West Ashley Park is a 260-acre public park that includes four soccer fields, two playgrounds, a disk golf course, two basketball courts, and four softball fields, as well as trails for walking and biking.

The West Ashley Greenway, a 10.5-mile trail that runs just south of US 17, and the West Ashley Bikeway, a 2.5-mile paved trail that runs through inner West Ashley, are also popular recreation spots in West Ashley.

There are many places of historic and archeological importance in West Ashley due to the area's history as part of the City of Charleston. Among many others, the National Register of Historic Places lists the following districts and buildings found within West Ashley: St. Andrews Episcopal Church, Ashley River Road from Church Creek to SC 165, Drayton Hall, Magnolia Plantation and Gardens, and the Site of Old Charles Towne.

### 3.2.5 Access and Mobility

Major roads in the CIA study area include Ashley River Road, Paul Cantrell Boulevard, and Sam Rittenberg Boulevard. According to the South Carolina Department of Transportation (SCDOT), the 2017 AADT on I-526 from Paul Cantrell Boulevard to Leeds Avenue was 81,900.

Main streets are not easily walkable or bikeable causing residents to rely on cars or public transportation to reach work, shopping, and entertainment destinations. According to 2017 ACS data, 91% of employed West Ashley residents drive to work, with 2% utilizing public transportation, 2% bicycling or walking, and 5% working at home. The average commute time is 23 minutes, with outer West Ashley residents facing the longest commutes.

CARTA operates five routes that run throughout West Ashley. Routes 30 and 32 primarily serve inner West Ashley, running from the Citadel Mall to downtown Charleston and North Charleston respectively. Route 301 primarily serves outer West Ashley, running from the Citadel Mall to Bees Ferry Road. Route 33 runs from Bees Ferry Road to downtown Charleston and includes many stops in both inner and outer West Ashley. Route 31 includes one stop in West Ashley and includes termini in St. James Island and downtown Charleston. With the exception of Route 301, which does not run on Sundays, all routes run seven days a week.

Paul Cantrell Boulevard in the West Ashley portion of the I-526 study area is not a designated bicycle route nor are there any bicycle accommodations on the roadway. There are no sidewalks on Paul Cantrell Boulevard within the immediate vicinity of the I-526 corridor.

### 3.2.6 Employment and Income

The largest public sector employers in Charleston County include Joint Base Charleston and Medical University of South Carolina (MUSC), while the largest private sector employers include The Boeing Company and Roper St. Francis Healthcare. MUSC-Rheumatology and Immunology clinic is located in West Ashley, as well as MUSC Health West Campus, which is located in the Citadel Mall. Roper St. Francis Healthcare operates multiple facilities in West Ashley, including Bon Secours St. Francis Hospital, primary care clinics, and several specialty clinics.

According to the ACS 2016 data, unemployment rates in the West Ashley CIA study area range from 2% (Block Groups 26133 and 26134) to 12% (Block Group 26142). In 2016, there were two Block Groups (26121 and 26142) that had a higher unemployment rate than the South Carolina average, which was 5.3%. The median household income for Block Groups ranges from \$28,000 in Block Group 26134 to \$96,184 in Block Group 26133. Only two Block Groups (26111 and 26133) have a median household income at or above the South Carolina median of \$54,336. The percent below poverty level ranges from 4% in Block Group 26133 to 40% in Block Group 26142.



## 3.2.7 Neighborhoods

The CIA study area within West Ashley can be divided into eight areas with 29 neighborhoods total. The eight areas were determined by grouping neighborhoods with similar housing types and demographics. As shown in Figure 3.11, the following areas are within the CIA study area:

- Area 1: Mulberry Place at Westborough, Dogwood Road, and Beechwood mobile homes
- Area 2: The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane
- Area 3: Ashley Harbor
- Area 4: Marsh Cove, Ricefield Townhomes
- Area 5: Colonial Village at Westchase, Radius at West Ashley, Ashley Oaks, 1800 Ashley West
- Area 6: San Miguel Road, Savage Road, Brighton Place, Able Street, Richmond Street
- Area 7: Abberly at West Ashley
- Area 8: Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, Castlewood Townhouses

### 3.2.7.1 Area 1: Mulberry Place at Westborough, Dogwood Road, and Beechwood mobile homes

Area 1 includes the neighborhoods of Mulberry Place at Westborough, Dogwood Road, and Beechwood mobile homes (Block Groups 26111 and 26134). This area is located in West Ashley, west of I-526, between Ashley River Road and Ashley Crossing Drive. This area is primarily residential, with other apartment complexes bordering these houses and mobile homes.

#### **Population and Housing**

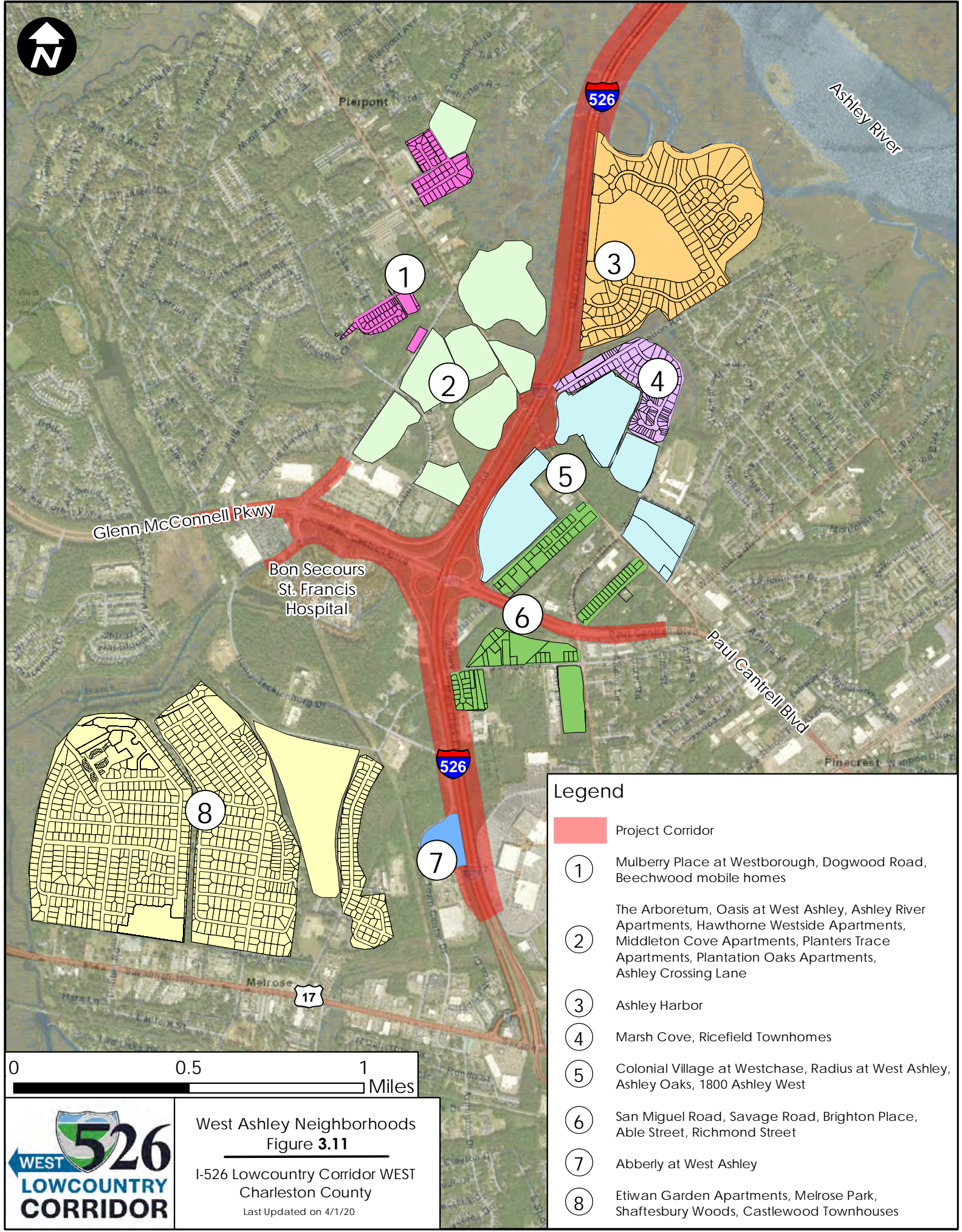
The houses in Area 1 were built between 1959 and 2017, with the average being built around 2005. On average, the home appraisal for houses in this area is approximately \$166,000 and houses are built on approximately 0.25 acres. The majority of residences in this area are vinyl or brick sided single-family, multi-story homes.

#### **Community Services and Facilities**

Area 1 homes are located within the City of Charleston, in Charleston County. These residences use Springfield Elementary School, West Ashley Middle School and West Ashley High School. There is one religious center (Charleston-Atlantic Presbytery Church) near Area 1.

#### **Mobility and Accessibility**

In Area 1 there are sidewalks along Cedar Petal Lane and two transit stops located near the north section of this area, on Ashley River Road. This short sidewalk provides residents with connectivity to Beechwood Road.



Note: Single family residential areas are shown with parcel boundaries, while multi-family residential areas are shown as solid shapes

### 3.2.7.2 Area 2: The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane

Area 2 includes the neighborhoods The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, and Ashley Crossing Lane. (Block Groups: 26111 and 26134). This area is located in West Ashley, directly west of I-526 and north of Paul Cantrell Boulevard. Divided by apartment complexes, this area is primarily residential, with Hawthorne Westside bordering a commercial office park at the south end of the area and Ashley River Plantation at the north end bordering a Public Storage facility.

#### **Population and Housing**

The houses in Area 2 were built between 1995 and 2017, with the average being built around 2012. On average, the cost of rent for one of the apartments in this area ranges from \$845 (Planters Trace Apartments) to \$1,019 (Ashley River Apartments) per month. The majority of residences in this area are multi-family rentals within larger apartment complexes (Photograph 23).



*Photograph 23: Example of the apartment complexes in Area 2*  
*SOURCE: Ashley River Apartments*

#### **Community Services and Facilities**

Area 2 apartments are located within the City of Charleston, in Charleston County. These residences use Springfield Elementary School, West Ashley Middle School and West Ashley High School. There are two religious centers and one medical center (West Ashley Medical Center) within Area 2. Most of the apartment complexes in Area 2 provide residents with community amenities such as a gym, pool, grills, dog parks, tennis courts and volleyball courts.

### **Mobility and Accessibility**

There are sidewalks within Area 2 that provide internal connectivity for each apartment complex. These sidewalks connect residents with outdoor facilities such as the pool, gym, or dog parks. There are four transit stops located near Area 2, on Ashley River Road.

### **3.2.7.3 Area 3: Ashley Harbor**

Area 3 includes the neighborhood of Ashley Harbor (Block Group 26121). This area is located in West Ashley, directly east of I-526 and south of the Ashley River. Located on Ashley Hall Plantation Road, this area is gated and other than a few Home-Owners Association (HOA) properties is exclusively residential.

### **Population and Housing**

The houses in Area 3 were built between 1984 and 2017, with the average being built around 2004. On average, the home appraisal for houses in this area is approximately \$629,500 and parcels are approximately 0.63 acres. The Ashley Harbor neighborhood is comprised of single-family detached homes, many with direct access to the Ashley River (Photograph 24). Homes sold in this subdivision in 2018 range from \$330,000 to \$785,000. The homes that feature their own private docks to the Ashley River range in value from \$1.05 million to \$2.77 million. The majority of residences in this area are two or three-story, single-family, brick homes with two-car garages and large properties. As an established and well-maintained subdivision, these homes have extensive landscaping and vegetative growth in their front and backyards. Many also include swimming pools.



*Photograph 24: Homes in the Ashley Harbor neighborhood located on the Ashley River*  
*SOURCE: Zillow.com*

### **Community Services and Facilities**

Area 3 homes are located within the City of Charleston, in Charleston County. These residences use Springfield Elementary School, West Ashley Middle School and West Ashley High School. There are not any religious centers in Area 3, and there are not many public recreational facilities, but Ashley Harbor has its own community amenities. With an HOA fee of \$1,440 per year, homeowners have access to walking trails, a sauna, tennis courts, and a pier. The neighborhood also has a security guard at the front of the gated community.

### **Mobility and Accessibility**

There are not any sidewalks or transit stops located within Area 3, so residents likely use single-family vehicles to navigate in and out of their neighborhood.

### **3.2.7.4 Area 4: Marsh Cove, Ricefield Townhomes**

Area 4 includes the Marsh Cove neighborhood and the Ricefield Townhomes along Ashley Hall Plantation Road (Block Group 26121). This area is located in West Ashley, directly east of I-526 and north of Ashley River Road. This area is primarily residential with apartment complexes (Ashley Oaks Apartments and 1800 Ashley West) to the south and the Ashley Harbor neighborhood to the north.

### **Population and Housing**

The houses in Area 4 were built between 1960 and 2017, with the average being built around 2006. On average, the home appraisal for houses in this area is approximately \$177,500 and parcels are approximately 0.21 acres. The majority of houses in this area are one or two-story, single-family homes with brick or vinyl siding, backyards, and the occasional pool. The apartments are two-story, brick buildings with about four units per building. As an older group of subdivisions, these houses have mature trees and other vegetative growth in their front and backyards. In this area, the average townhouse rental starts at around \$1,200 per month. The Marsh Cove neighborhood consists of townhouses and single-family homes. Development of this subdivision began in the 1980s with a unique design style (Photograph 25) and a contemporary, beachy aesthetic. Properties in this neighborhood have home values between the mid-\$200,000s to \$300,000s.



*Photograph 25: Example of a typical home found in Marsh Cove*  
SOURCE: Zillow.com

### **Community Services and Facilities**

Area 4 homes and townhomes are located within the City of Charleston, in Charleston County. These residences use Springfield Elementary School, West Ashley Middle School and West Ashley High School. There are no religious centers, but there is one school, West Ashley Advanced Studies Magnet, near Area 4. There is also a Charleston Fire Station #16 located on Ashley Hall Plantation Road, within Area 4. The HOA fees that the residents of Marsh Cove pay include access to community recreational facilities, such as a swimming pool, tennis court, basketball court, and volleyball court.

### **Mobility and Accessibility**

There are no transit stops located throughout Area 4 but there are sidewalks along parts of Ashley Hall Plantation Road for residents to utilize. These sidewalks do not provide residents with connectivity to their HOA amenities, nor any other community facilities.

### **3.2.7.5 Area 5: Colonial Village at Westchase, Radius at West Ashley, Ashley Oaks, 1800 Ashley West**

Area 5 includes the neighborhoods of Colonial Village at Westchase, Radius at West Ashley, Ashley Oaks Apartments and 1800 Ashley West (Block Groups 26121 and 26134). This area is located in West Ashley, east of I-526 and just north of Paul Cantrell Boulevard. This area is primarily residential (mainly apartments) with one plaza between Paul Cantrell Boulevard and Ashley River Road for medical and government facilities.

### **Population and Housing**

The apartment complexes in Area 5 were built between 1994 and 2017, with the average being built around 2006. Monthly rent for a two-bedroom apartment at Radius at West Ashley starts at \$910, \$964 at 1800 West Ashley, \$919 at Ashley Oaks, and \$1,003 at Colonial Village at Westchase. These apartment complexes provide luxury and moderate housing options in Area 5. The majority of complexes in this area are two to three stories with brick or vinyl siding (Photograph 26 and Photograph 27). Ashley Oaks Apartments is the largest apartment complex, with over 50 buildings and 1800 Ashley West is the smallest with 13 buildings. The landscaping at the Area 5 apartment complexes is maintained by the maintenance staff associated with each complex.



*Photograph 26: Ashley Oaks Apartments*  
*SOURCE: Google Street View*



*Photograph 27: Radius at West Ashley*  
*SOURCE: Google Street View*

### **Community Services and Facilities**

Area 5 apartments are located within the City of Charleston, in Charleston County. These residences use Springfield Elementary School, West Ashley Middle School and West Ashley High School. There are no religious centers within Area 5, but there is one school, West Ashley Advanced Studies Magnet, and a government facility, Social Security Office, nearby. The Charleston Fire Department also has a station located directly north of the Ashley Oaks Apartments. Each apartment complex provides their residents with community amenities such as laundry facilities, community center, and exercise facilities, swimming pools, and dog parks.

### **Mobility and Accessibility**

Besides those leading up to individual apartment units, there are very few sidewalks for residents to use in Area 5. There are three transit stops located near Area 5 on Ashley River Road that give residents access to public transportation.

### **3.2.7.6 Area 6: San Miguel Road, Savage Road, Brighton Place, Able Street, Richmond Street**

Area 6 includes the neighborhoods on San Miguel Road, Savage Road, Brighton Place, Richmond Street, and Able Street (Block Groups: 26141, 27011). This area is located in West Ashley, east of I-526, and just north and south of Paul Cantrell Boulevard. Area 6 is primarily residential but has commercial shopping centers and businesses surrounding it. Notably, Citadel Mall, with big box stores such as Target and Belk, is located just south of these neighborhoods.

### **Population and Housing**

The houses in Area 6 were built between 1934 and 2017, with the average being built around 1997. On average, the home appraisal for houses in this area is approximately \$87,000 and parcels are approximately 0.41 acres. The appraisal number may increase in the future as the area is becoming more desirable due to the newly renovated shopping centers and nearby healthcare facilities. There is also evidence of increasing property values in the neighborhoods near Richmond Street. For example, one 2018 home sold in 2019 for \$285,000, which is much higher than the \$87,000 average



(Photograph 28). Other properties in this neighborhood have recently been valued around high \$190,000. The majority of residences in this area are brick, single-family, single-story ranch homes, with the exception of the townhome and apartment communities. Brighton Place is an affordable, two-story complex with brick or concrete siding. According to the Charleston County Housing and Redevelopment Authority, Brighton Place receives rental subsidies through HUD-Assisted Housing for some or all of its apartments (100 units total). Tenants make a monthly contribution toward rent equal to 30% of their adjusted income.

### **Community Services and Facilities**

Area 6 homes are located within the City of Charleston, in Charleston County. These residences use Stono Park Elementary School, Springfield Elementary School, West Ashley Middle School and West Ashley High School. There are at least five religious centers (one of which is primarily Spanish speaking) near or within Area 6, and there are no local community parks or facilities. Brighton Place provides their residents with a community laundry facility, community center, and resident programs.

### **Mobility and Accessibility**

There are eight transit stops located throughout Area 6 on Orleans Road and Richmond Street. Sidewalks can be found on Orleans Road and portions of Savage Road, intermittently connecting residents to transit stops and healthcare buildings.

### 3.2.7.7 Area 7: Abberly at West Ashley

Area 7 includes the Abberly at West Ashley luxury apartments (Block Group 27011). This area is located in West Ashley, directly west of I-526 and south of Glen McConnell Parkway. Directly south of this apartment complex lies a commercial plaza with Costco Wholesale, Costco Vision, and Costco Gasoline center.

#### Population and Housing

The residential section of Area 7 includes a four-story apartment called Abberly at West Ashley (Photograph 29). The average apartment rental for this complex starts at \$1,000 per month. It was built in 2005 and there are seven buildings and one leasing office on its almost nine-acres of land. The landscaping in Area 7 is maintained by the Abberly at West Ashley staff.



Photograph 29: Abberly at West Ashley

SOURCE: Abberly at West Ashley

#### Community Services and Facilities

The Area 7 apartments are located within the City of Charleston, in Charleston County. These residences use Oakland Elementary School, West Ashley Middle School, and West Ashley High School. There are no religious centers in Area 7, and there are not many public recreational facilities. The Abberly at West Ashley apartments provides residents with amenities such as a dog park, swimming pool and fitness center.

#### Mobility and Accessibility

There are not any transit stops located within Area 7, and available sidewalks provide inner connectivity between apartment buildings and apartment amenities such as the pool and fitness center. Because of the lack of transit stop availability, residents likely use single-family vehicles to navigate in and out of their apartment complex.

### 3.2.7.8 Area 8: Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, Castlewood Townhouses

Area 8 includes the neighborhoods Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, and Castlewood Townhouses (Block Groups 26142, 26141, and 27011). This area is located in West Ashley, west of I-526 and just north of Savannah Highway (US 17) This area is primarily residential, with Long Branch Creek bordering Etiwan Way at the western end and a commercial shopping center at the southern end, along Savannah Highway.

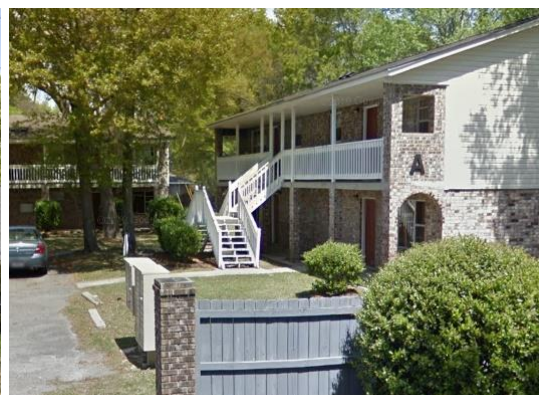


## Population and Housing

The houses in Area 8 were built between 1967 and 2017, with the average being built around 2005. On average, the home appraisal for houses in this area is approximately \$164,000 and parcels are approximately 0.2 acres. The majority of residences in this area are vinyl or brick sided single-family, single-story homes, with the exception of the townhome and apartment communities (Photograph 30). Melrose Park townhomes, Shaftesbury Woods townhomes, Castlewood Townhouses and Etiwan Garden Apartments (Photograph 31) are similar two-story complexes with brick or vinyl siding and moderate landscaping. These townhouses and apartments provide moderately priced housing for residents in this area. A two-bedroom townhouse rental at Castlewoods Townhouses starts at \$910 a month, while buying a comparable two-bedroom townhouse in Melrose Park averages around \$120,000.



Photograph 30: Example homes in the Etiwan Way neighborhood  
SOURCE: Google Street View



Photograph 31: Etiwan Garden Apartments  
SOURCE: Google Street View

## Community Services and Facilities

Area 8 homes are located within the City of Charleston, in Charleston County. These residences use Oakland Elementary School, West Ashley Middle School, and West Ashley High School. There are two religious centers (Charleston Seventh-day Adventist Church and Essex Village Church of Christ) near Area 8, but there are no public parks or community centers. Melrose Park, Shaftesbury Woods, and Castlewood Townhouses each provide their residents with limited community amenities such as a laundry facility or a swimming pool.

## Mobility and Accessibility

There are six transit stops located throughout Castlewood Townhouses on Castlewood Boulevard and three additional stops on Savage Road. Sidewalks are limited to those that lead to each apartment building.

## 3.3 ENVIRONMENTAL JUSTICE NEIGHBORHOODS

There are four areas that will likely face substantial impacts with the implementation of the I-526 LCC WEST project including Russelldale, Highland Terrace, Liberty Park, and Ferndale. In addition, several homes on West and East Ada Avenue in the Wando Woods neighborhood and on Ozark Street and Seiberling Road in the Camps neighborhood in North Charleston are likely to be impacted by the I-526 LCC WEST project. Descriptions of each impacted EJ residential area are detailed in the EJ Analysis found in the DEIS Appendix G.

## 3.4 OTHER SPECIAL POPULATIONS

### 3.4.1.1 Disabled Individuals

The definition of disability varies, however, it is generally used as a way to describe conditions that affect an individual's interaction with their environment. A disability may include a physical disability but can also include barriers in the build environment that prohibit movement and social interaction. As such, the goals of programs supporting disabled persons emphasize actions that promote independence and social involvement.<sup>14</sup> Census disability questions focus on the following six themes: hearing, seeing, cognitive abilities, ambulatory ability (walking/climbing stairs); self-care, and independent living. Table 3.1 shows estimates of disabled persons at the national, state, and county level. Charleston County's disabled population percentage is below both state and national averages.

Table 3.1: Disabled population estimates at the national, state, and county level

Geographic Area	Total Population with a Disability	Disabled Persons as a Percent of the Total Population
United States	39,272,529	12.5%
South Carolina	691,835	14.6%
Charleston County	40,958	11.0%

SOURCE: U.S. Census Bureau 2012-2016 American Community Survey 5-Year Estimates

NOTE: Disability data is not available for recent ACS datasets.

There are a number of state and county programs in North Charleston that provide services and support for disabled persons. The proposed project would not relocate or otherwise adversely affect any facilities that provide services for the disabled.

### 3.4.1.2 Elderly Individuals

Within the CIA study area, elderly populations vary widely between census Block Groups. As shown in Table A.3, in North Charleston, Block Groups with the highest percentages of residents over 65 years of age include 450190039001 (26%), 450190035002 (25%), and 450190033001 (24%). These Block Groups include the following neighborhoods: the eastern portion of Wando Woods, Oak Park, Cameron Terrace, Palmetto Gardens, Singing Pines, Boland Park, Fair Haven Trailer Park, and southern portion of Liberty Park.

In the West Ashley portion of the CIA study area, Block Groups 26134 (24%) and 26142 (20%) contain the highest percentages of residents over 65 (see Table A.7). These Block Groups primarily contain apartments, mobile homes and townhomes located between Glenn McConnell Parkway and US 17 (Savannah Highway). There are three assisted living centers within Block Group 26134, which contributes to the high percentage for this Block Group. The Palmettos of Charleston is located west of I-526, just north of Paul Cantrell Boulevard on Ashley Crossing Drive. Brookdale West Ashley is just west of The Palmettos on Charlie Hall Boulevard. Ashley River Plantation is located along Ashley River Road to the north of Brookdale West Ashley. Block Group 26142 contains the Ashley Gardens Assisted Living and Memory Care Center, located south of Paul Cantrell Boulevard on Henry Tecklenburg Drive. As shown in Figure 3.9 none of these facilities are adjacent to or within close proximity to the project corridor.

<sup>14</sup> <https://www.census.gov/topics/health/disability/about.html>

No planned active-adult (55+) neighborhoods are located along the project corridor. The Trident Area Agency on Aging is located on the west side of I-26 on the north side of Remount Road. This organization provides guidance related to caregiving for seniors and resources to support independent living. As shown in Figure 3.6, the Trident Area Agency on Aging none of these facilities are adjacent to or within close proximity to the project corridor.

### 3.4.1.3 Limited English Proficiency (LEP) Populations

The Department of Justice's "Safe Harbor" LEP threshold is met when a study area's population exceeded either 1,000 adults or 5% of the study area population speak English "less than very well" as documented by Census Bureau survey results. 2013-2017 American Community Survey (ACS) data was evaluated to determine if the number of LEP individuals within the CIA study area would exceed the LEP Safe Harbor threshold. As described in the EJ Analysis in the DEIS Appendix G, and in Table A.3 and Table A.7 in the CIA Appendix A, there are nine Block Groups with LEP populations exceeding 5% of the total Block Group population. When the number of LEP individuals are tallied in those Block Groups, the total is 1,886 which meets the 1,000 Safe Harbor Threshold (in this instance for Spanish-speaking populations) and necessitates additional actions to ensure that all members of the public are provided with an equitable opportunity to participate in public outreach and engagement.

## 3.5 BUSINESS COMMUNITY PROFILE

### 3.5.1 North Charleston

In the North Charleston portion of the CIA study area, I-526 traverses industrial, residential, and commercial land uses. At the Cooper River, the project corridor is initially flanked on both sides by port-related facilities and industrial uses. Traveling westward, the project corridor is surrounded by residential development, with the exception of the Rivers Avenue commercial corridor. Rivers Avenue is a commercial corridor with a large amount of strip development containing restaurants, retail, and services. Commercial uses extend west from Rivers Avenue across I-26 north of I-526 via Remount Avenue but also include a number of manufacturing companies such as Miller Signs and Warren Fastenings South, as well as auto and hydraulic repair services such as Fenix Automotive and Hydradyne. This area also includes several shipping and supply services, likely located here to be within close proximity to freight, air, and port distribution avenues. West of the I-26 interchange, I-526 is bordered to the north by Boeing Company, the Charleston International Airport, and Joint Base Charleston. Boeing and Joint Base are top local employers, with 7,000 and 22,000 employees respectively.

Between I-26 and International Boulevard, businesses along the project corridor are primarily retail, restaurants, and entertainment-related. This portion of the CIA study area includes Tanger Outlets, the Charleston Area Convention Center, North Charleston Coliseum and Performing Arts Center, and a large number of restaurants and hotels.

Further west and south, commercial uses are present along between West Montague Avenue and Dorchester Road. These businesses include a number of building material suppliers and a trucking company.

Businesses surrounding the I-526 interchange with Leeds Avenue area are more office and service related, including Aerotek an employment agency and Select Health SC a health insurance agency. This area includes the academic institutions of Limestone College and Cummins Technical Center and is the central location for government offices including Charleston County government and the Internal Revenue Service.

### 3.5.2 West Ashley

West of the Ashley River, the project corridor travels through residential development to the southern terminus at Paul Cantrell Boulevard. There is some commercial development on the north side of I-526 including a shopping center with a Kohl's, Food Lion, and Joann Fabrics and several fast food restaurants. The West Ashley Medical Center and NHC Healthcare Rehabilitation Center are also located in this area.

## 4.0 PUBLIC INVOLVEMENT

This is an overview of the public involvement conducted to date. The public involvement effort is intended to establish and maintain communication between the community, SCDOT, and FHWA. To establish an action plan for community involvement, a Public Involvement Plan and an Environmental Justice (EJ) Outreach Strategy were developed. Engaging the public at the very early stages helps ensure decisions consider and benefit public needs and preferences, while developing potential alternatives for the proposed project area. Chapter 6 in the DEIS describes all the public involvement efforts used throughout all phases of the project to date. Additional efforts are ongoing, and the results of future public involvement would be included in the Final Environmental Document.

The key communication tools include:

- Community Project Office – The office is staffed during regular weekday business hours and by appointment as needed to accommodate individual schedules. The Project team hosted an open house for the community to: generate awareness about the community office and the valuable resources available there; build trust in the community by providing repeated exposure to consistent community office staffing; integrate into the project area community to become the trusted resource for accurate project information; share project information with the community; and gather feedback on upcoming Community Office Workshops.
  - Number of office visitors through March 16th: 240
  - Number of incoming calls through July 10th: 109
  - Number of voicemails through July 10th: 28
- Community Advisory Council (CAC) - 10 meetings held to date. Formed from community members from each of the potentially impacted EJ neighborhoods, the purpose of the CAC is to help advise the project team on the communities' needs, understand the full extent of project impacts in the community, and provide input on the most effective ways for the project team to be accessible to the community.
- Project Hotline - project information available verbally at any hour of the day
- Public Information Meeting - November 2019
- Public Information Virtual Meeting - Available online from November 2019 through January 2020
- Stakeholder Meetings - 6 meetings with local business leaders
- Community Meetings – A way to encourage discussions with participants, share information as it relates to the project, and provide an opportunity for residents to meet SCDOT personnel and the Community Office staff who can respond to future questions, concerns, or comments regarding the project.
  - 8 in North Charleston and 1 in West Ashley in July and October 2016
  - 4 in North Charleston and 1 in West Ashley in November 2019
- Pop-up meetings - A means of creating and promoting dialogue to determine what residents see as assets, liabilities, and possible solutions to issues within their respective neighborhoods. The project team chose locations that focus on engaging residents of the affected EJ neighborhoods as well as the larger minority community in North Charleston.
  - 12 meetings were held in 2019
- Flyers – An effort to keep citizens in and around the affected areas up to date on project information without relying on the use of technology, making it more accessible for those with limited computer/internet resources.
  - June 2019 to March 2020 over 600 flyers were distributed

- Website - [www.526lowcountrycorridor.com](http://www.526lowcountrycorridor.com) in English or Spanish
- Social Media - Project-specific Facebook and Twitter accounts
- Newsletters - distributed to property owners within the public outreach area via mail and/or email
- Speakers Bureau - 19 Presentations
- Door-to-door canvassing - to alert the potentially impacted EJ communities about upcoming ways to participate such as Community Drop-Ins or the Community Office Open House.

## 4.1 ENVIRONMENTAL JUSTICE OUTREACH STRATEGY

As a part of the project’s development, a comprehensive Public Involvement Plan (PIP) was developed to outline how the public will be engaged during the project. Since EJ neighborhoods were identified along the project corridor and these communities are potentially impacted by the project, this separate and specific EJ Outreach Strategy was developed to incorporate efforts designed to engage those residents and business owners. Information on the EJ Outreach Strategy can be found in the DEIS Appendix X. Additional details on the EJ neighborhoods and the anticipated impacts from the proposed project can be studied in Appendix G of the DEIS.

## 4.2 PUBLIC COMMENTS

Comments from the 2016 community meetings and surveys include concerns about congestion, safety, dangerous movements/weavings, the distance between interchanges, environmental impacts, loss of property and transit. Other concerns include the cost of the project, the time it would take to complete, and the real benefit once completed. Comments are representative of 1,549 individual commenters, most of which are survey respondents (1,425).

During the formal comment period for the first in-person public meeting and associated community meetings (November 2019 - January 2020), 553 comments were received and responded to. The in-person meeting comment topics included concerns over Right-of-Way impacts (35%), concerns with preserving the natural environment (15%), in favors of transit (17%), in favor of bike/ped lanes (11%), concerns with noise impacts (12%), and in favor of a no-build scenario (12%). The full comments response database (comments and responses) can be studied further in Appendix Z of the DEIS.

In addition to gathering feedback on the proposed project, the project team was able to conduct a social needs assessment with EJ residents to help identify resident needs and priorities separate from the transportation project. Understanding residents’ needs and priorities is a vital part of the EJ Community Mitigation Plan development as it aims to address many of the identified issues related to direct and cumulative effects associated

### **SOCIAL NEEDS ASSESSMENT: RANKED IN ORDER OF PRIORITY**

- |  |   |
|--|---|
| 1) Adequate stormwater management                            | 14) Adequate public transportation and facilities               |
| 2) Adequate sidewalks/bicycle facilities                     | 15) City’s response to requests related to public services      |
| 3) Availability of quality housing                           | 16) Availability of employment-assistance services              |
| 4) Availability of affordable housing                        | 17) Availability of nearby medical services                     |
| 5) Availability of agencies providing services for seniors   | 18) Parks and recreation facilities                             |
| 6) Availability of agencies providing services for youth     | 19) Employment opportunities                                    |
| 7) Quality of teaching at schools                            | 20) Availability of opportunities for small businesses          |
| 8) Well-lit streets/sidewalks                                | 21) Quality of daycare centers                                  |
| 9) Appearance of neighbors’ homes                            | 22) Ability to open a small business                            |
| 10) Safety of schools  | 23) Emergency services response times (ambulance, police, fire) |
| 11) Availability of youth employment opportunities           | 24) Availability of affordable daycare centers                  |
| 12) Availability of supervised after-school youth activities | 25) Garbage collection frequency                                |
| 13) Availability of good grocery stores                      |   |

with the project. A total of 47 EJ neighborhood residents participated in the survey. All categories were considered important, with residents generally unsatisfied with current services and programs. The survey results show how residents rank the 25 social need categories included in the survey (see table below). Top social needs priorities include infrastructure needs related to stormwater management, bike/pedestrian facilities, and quality affordable housing followed by services for seniors and youth.

### 4.3 LIMITED ENGLISH PROFICIENCY (LEP) POPULATION ENGAGEMENT

The project team works to intentionally provide outreach and engagement opportunities to the LEP population, whose primary speaking language within the EJ communities is Spanish. Details on LEP engagement efforts can be further studied in the EJ Analysis and the EJ Outreach Strategy, located in DEIS Appendix G and X, respectively.

## 5.0 ENVIRONMENTAL CONSEQUENCES: DIRECT, INDIRECT, AND CUMULATIVE

This section describes the “impacts” or sometimes called “effects” of the proposed project, including direct impacts associated with the project’s construction as well as indirect and cumulative effects related to proposed project.

Direct effects are those that are caused by the project itself and occur at the same time and place. Direct impacts include impacts such as displacements and impacts to natural resources. Indirect effects (also known as secondary effects) are caused by the action but are later in time or farther removed in distance from the project but are still “reasonably foreseeable.” These impacts may include growth-inducing effects and thereby impacts related to land use changes that would not otherwise occur without the project implementation. Changes in rate and type of development can result in adverse effects on air, water, and other natural systems, including ecosystems.<sup>15</sup> Analysis of indirect impacts follows the eight steps outlined in the National Cooperative Highway Research Program Report (NCHRP) 466: Estimating the Indirect Effects of Proposed Transportation Projects.<sup>16</sup> Cumulative effects are defined as “the impact of the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions...”.<sup>17</sup> As stated in FHWA guidance on assessing cumulative effects, not all impact categories require a cumulative impact assessment. Resources requiring cumulative impact assessment are determined early in the project development process, based on each project’s setting and context.<sup>18</sup> Given the urbanized setting of the proposed project, community impacts, water quality, noise, and streams/wetlands, were identified as categories meriting cumulative impact assessment. These categories were developed in consideration of input received during early agency coordination and public involvement. Cumulative effects on communities are discussed below and further detailed in the EJ Analysis, DEIS Appendix G. Cumulative effects on water quality and streams/wetlands are discussed in the Indirect and Cumulative Effects Assessment, DEIS Appendix F.

It is also noted that Executive Order 12898 on Environmental Justice states that, when practical and appropriate, multiple and cumulative exposures to substantial environmental hazards must be analyzed.<sup>19</sup> As such, an air

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<sup>15</sup> 40 CFR § 1508.8

<sup>16</sup> National Cooperative Highway Research Program. Report 466: Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects. 2002. Web. [https://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_466.pdf](https://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_466.pdf)

<sup>17</sup> 40 CFR § 1508.7

<sup>18</sup> Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process <https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx>

<sup>19</sup> EO 12898 Section 3-301(b)

quality assessment was prepared for this project in acknowledgement of the project setting's multiple environmental hazards associated with port operations, the Charleston International Airport and adjacent Boeing facility, and past industrial practices. The Air Quality Impact Analysis can be reviewed in DEIS Appendix J.

## 5.1 LAND USE

The I-526 LCC WEST project would require additional right-of-way at various locations along the project corridor. As described in Sections 3.1.1 and 3.1.2, the North Charleston area is characterized by residential, industrial, and commercial land use with limited undeveloped/available land. Aside from direct impacts associated with converting land from its current use to right-of-way, no other impacts to land use would be associated with the proposed project. The proposed freeway widening, improved I-26 / I-526 interchange, and associated improvements on Rivers Avenue at Aviation Drive would not alter existing land use along the densely developed project corridor. Because the project corridor and vicinity are already developed, land use changes along the project corridor and vicinity would occur as part of local planning initiatives rather than induced land use changes associated with the proposed project.

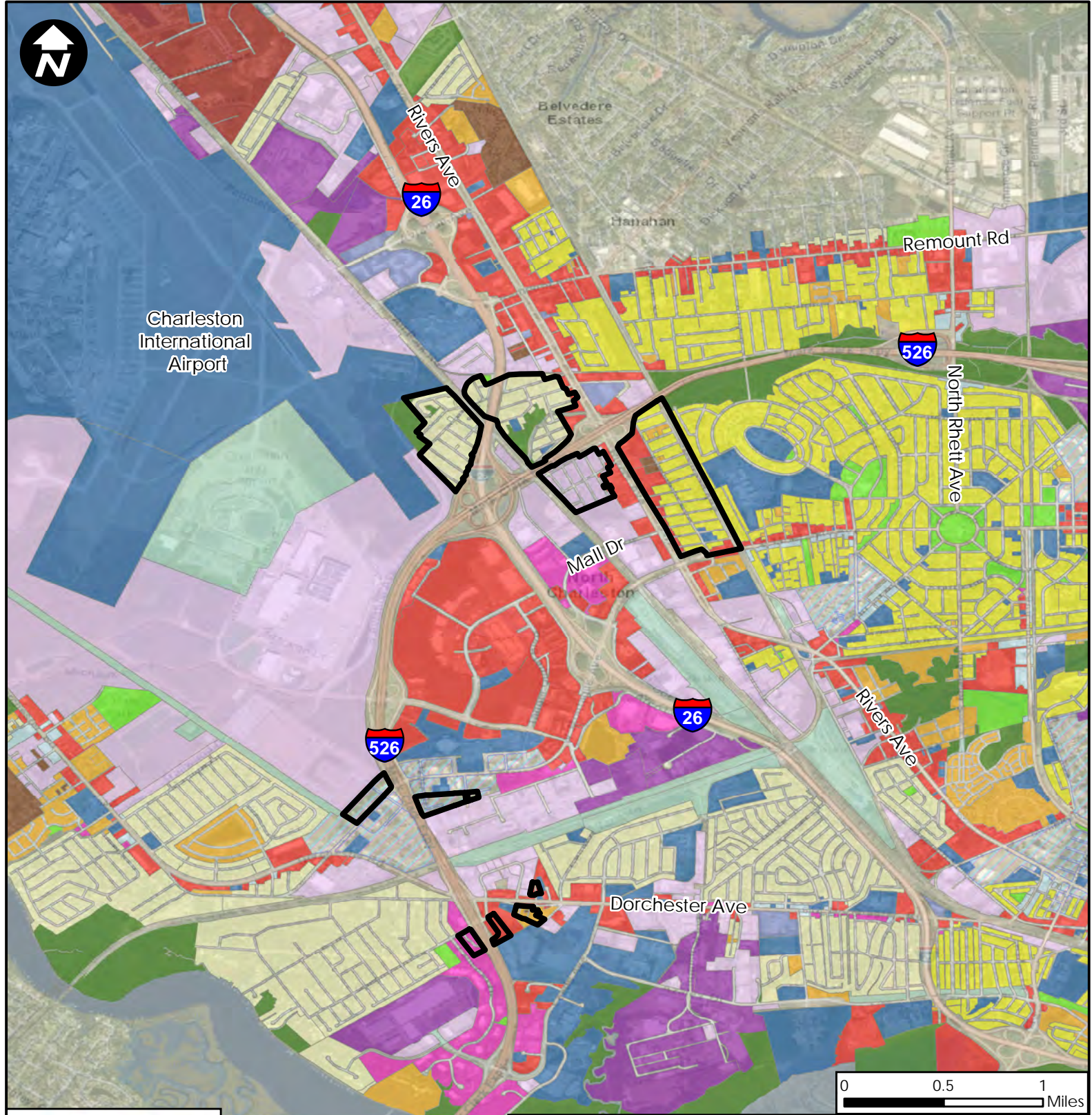
According to future land use mapping in Figure 5.1 that was provided by the City of North Charleston (February 2020), future land uses will generally remain consistent with existing land use, primarily single-family residential, commercial, and light industrial. One notable exception is a proposed change in land use for the Russelldale neighborhood. The neighborhood is currently zoned for single-family residential use with some multi-family residential and commercial uses on the periphery of the neighborhood. According to the City's future land use mapping, Russelldale would be zoned as "Light Industrial District" (M-1) together with areas to the south along Mall Drive and East Montague Avenue. M-1 zoning provides areas for commercial, warehousing, transportation, and certain light manufacturing activities; this change in land use is not consistent with current land uses and would make the neighborhood inhospitable to residential use and would be a barrier to reestablishing any form of community cohesion. In an area where affordable housing, and housing in general, is scarce and at a premium already, the conversion from residential to industrial uses would contribute to cumulative effects.

Charleston and surrounding municipalities have pro-growth policies, as evident by the future redevelopment of Palmetto Commerce Park and the Volvo car factory in Ridgeville.<sup>20,21</sup> As seen in Figure 5.2, a "Catalyst Area" is noted near the Environmental Justice neighborhoods, denoted in red, in North Charleston. A catalyst area is "designed to function as multimodal transportation hub and development activities to support regional and local transportation networks, such as commuter rail, light rail, and interconnecting buses, all with a high level of bicycle and pedestrian accessibility" (Partnership for Prosperity, 2014). Many catalyst areas focus on supporting existing neighborhoods and could be future opportunities for consistent economic growth. The catalyst area near the Russelldale neighborhood would focus development efforts on the Mall Drive district to expand growth from the existing commercial small lot and 'big box' retail, hotels, and restaurants.

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<sup>20</sup> The Post and Courier. "Retail center planned for industry-laden Palmetto Commerce Park in North Charleston." July 1, 2019. Web. [https://www.postandcourier.com/business/real\\_estate/retail-center-planned-for-industry-laden-palmetto-commerce-park-in/article\\_53d612ce-9925-11e9-9a25-5bc6603c1597.html](https://www.postandcourier.com/business/real_estate/retail-center-planned-for-industry-laden-palmetto-commerce-park-in/article_53d612ce-9925-11e9-9a25-5bc6603c1597.html)

<sup>21</sup> Volvo Cars. South Carolina Factory. Web. <https://www.volvocars.com/us/about-volvo/our-story/south-carolina-factory>



Charleston International Airport

Rivers Ave  
26

Remount Rd

526

North Rhett Ave

Mall Dr  
North Charleston

26

Rivers Ave

526

Dorchester Ave

0 0.5 1 Miles



North Charleston Future Land Use  
Figure 5.1

I-526 Lowcountry Corridor WEST  
Charleston County  
Last Updated on: 7/15/2020

LEGEND

- EJ Neighborhood
- Conservation
- Heavy Industrial District
- Neighborhood Commercial District
- Highway Oriented Use (B-3)
- Office, Professional District
- Parks and Recreation
- Redevelopment Priority District
- Institutional
- Single-Family Residential, Suburban
- Single-Family Residential, Traditional
- Transportation/Utilities
- Mixed Use
- Mobile Home Residential



As described in Sections 3.2.1 and 3.2.2, the West Ashley area is a suburb of Charleston and North Charleston and is characterized by a mixture of residential and commercial land use with limited undeveloped/available land. Commercial retailers include ‘big box’ names such as Costco and Target and are located along Sam Rittenberg Boulevard. As noted previously, I-526 and I-26 are utilized as ‘commuter corridors’ serving traffic beyond West Ashley communities. Because the study area is already developed, any growth is anticipated to occur with redevelopment, and induced land use changes associated with the project are not anticipated in West Ashley. Future land use in West Ashley is depicted in Figure 5.3.

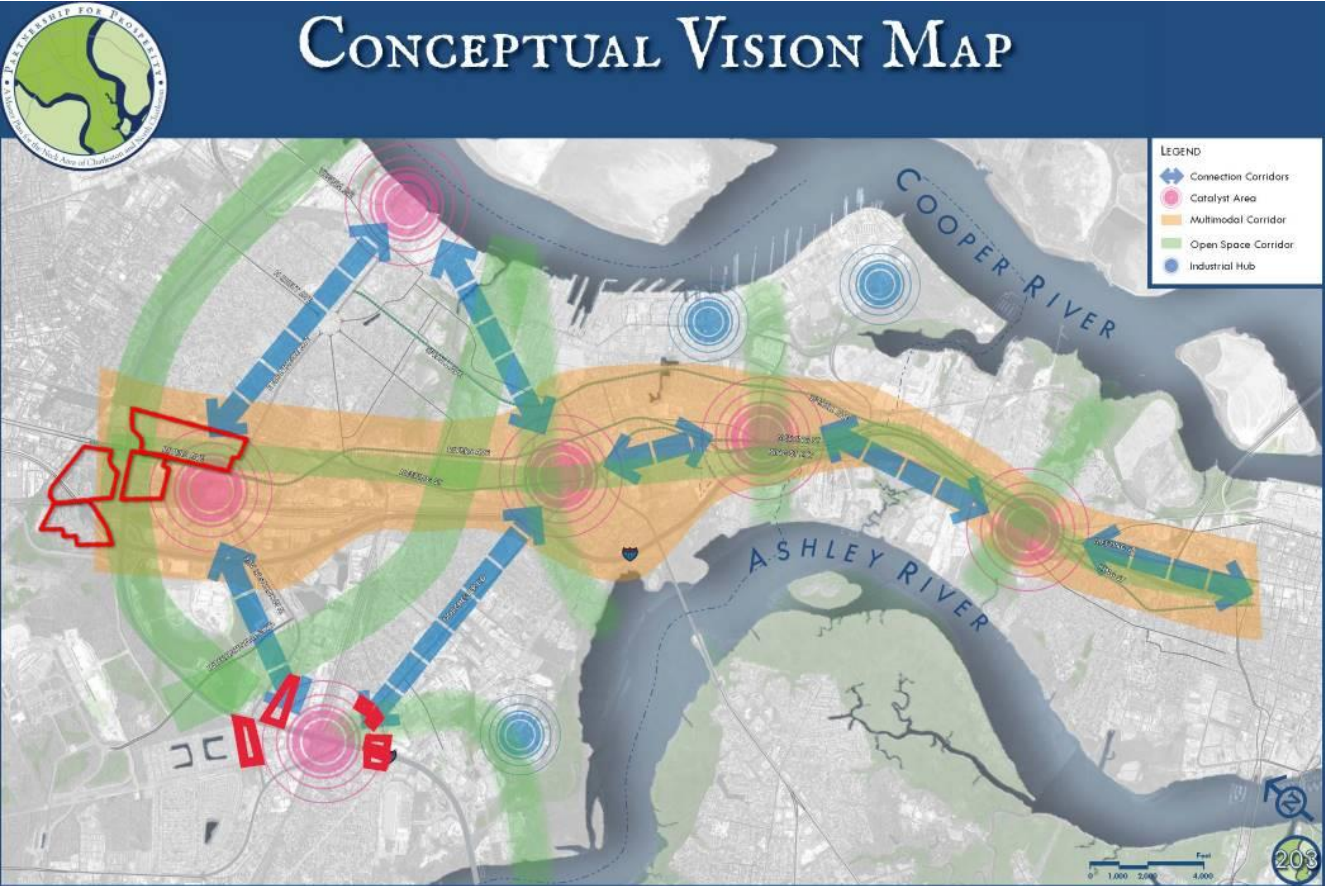


Figure 5.2: Catalyst Areas that reflect economic development zones in the neck of Charleston and North Charleston

Note: Red polygons represent EJ neighborhoods.

Source: Partnership for Prosperity, Berkeley-Charleston-Dorchester Council of Governments (BCDCOG)

[http://www.neckprosperity.org/uploads/2/5/0/5/25050083/draftreport\\_131206\\_web.pdf](http://www.neckprosperity.org/uploads/2/5/0/5/25050083/draftreport_131206_web.pdf)

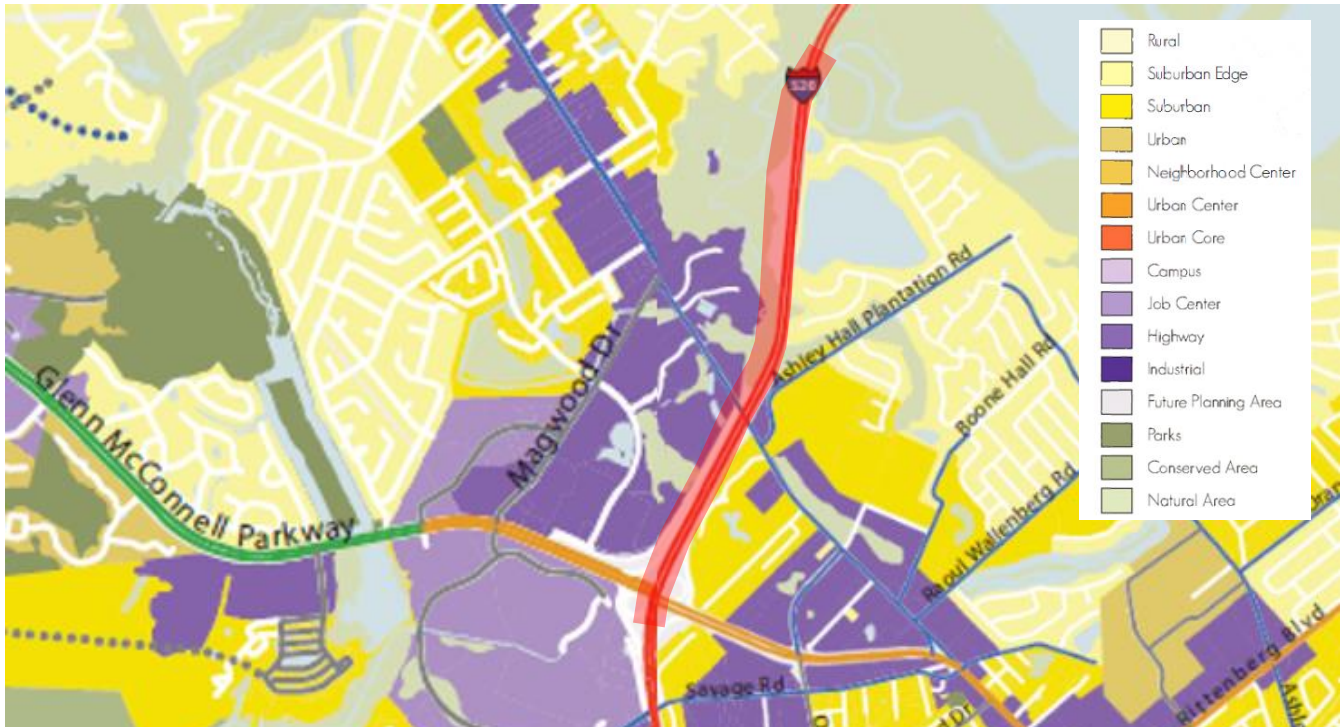


Figure 5.3 Future Land Use in West Ashley  
 Source: Century V: 2010 Comprehensive Plan Update, City of Charleston, SC  
<https://www.charleston-sc.gov/285/Century-V-Plan>

According to the Century V Plan, several areas along US 17/I-526 have been identified as economic development accommodation zones (Figure 5.4). Consistent with future lane use plans, this area is planned for high intensity mixed uses, which would most likely include vehicle-dependent commercial development. In addition, the Century V plan includes an urban growth boundary that expands West Ashley and Johns Island further west.

The improved mobility associated with the proposed improvements would not create indirect land use effects across the broader region as growth and development will continue to occur regardless of the proposed project. Regional population growth and development trends, pro-growth policies, and the availability of water, sewer, schools, and other infrastructure, indicate that growth and development will continue to occur in the broader Charleston region regardless of the proposed project.



Figure 5.4. Economic Development Opportunities  
 Source: 2015 Century V Plan  
<https://www.charleston-sc.gov/DocumentCenter/View/513/Land-Use?bidId=>

## 5.2 TRAVEL PATTERNS

The build alternatives would create minor travel pattern changes around the I-26 interchange at Aviation Avenue. The build alternatives propose the removal of two eastbound on-ramps on the south side of I-26 (shown in red in Figure 5.5) due to their proximity to the eastbound off-ramp to Remount Road. The proximity of these on- and off-ramps creates a very short distance for vehicles to merge on and off I-26, increasing the potential for sideswipes and other types of collisions. Travelers on northbound Aviation Avenue wishing to access eastbound I-26 would continue over I-26 to Rivers Avenue and move through a new reduced-conflict intersection (Figure 5.6) along Rivers Avenue then cross back over I-26 to access a new eastbound ramp onto I-26 from Remount Road.

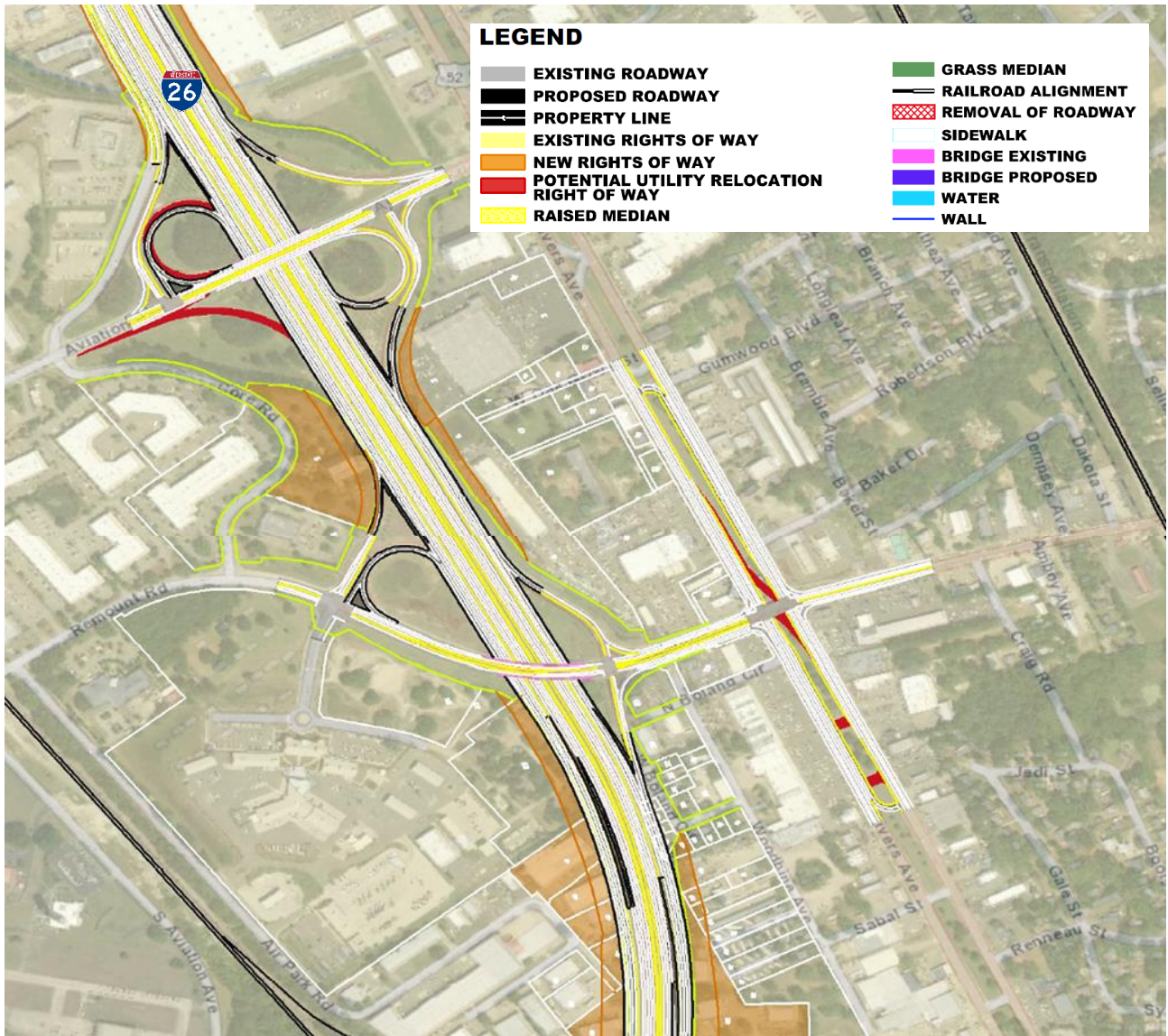


Figure 5.5: Alternatives 1, 2, 1A, and 2A along I-26

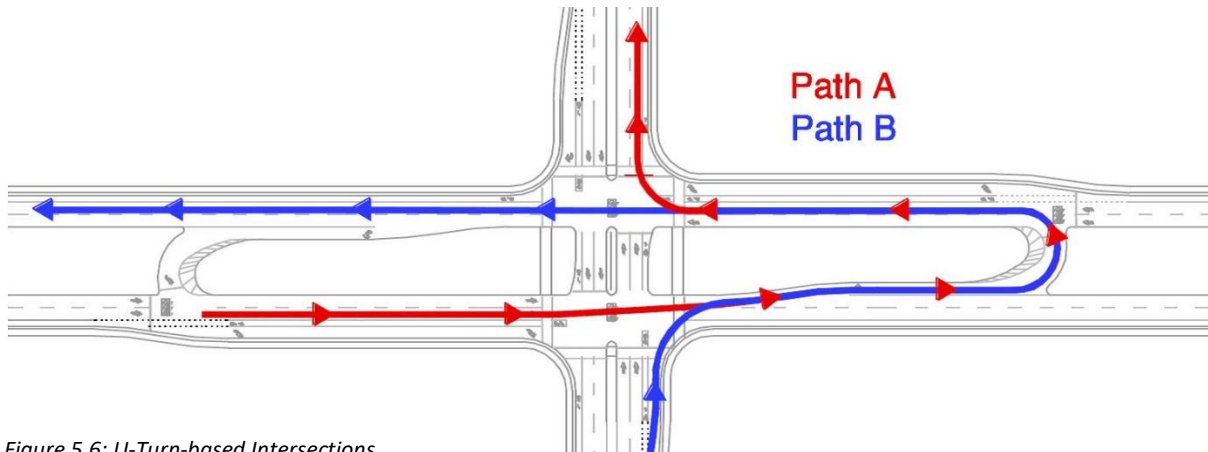


Figure 5.6: U-Turn-based Intersections  
<https://safety.fhwa.dot.gov/intersection/innovative/uturn/>

The

purpose of a reduced conflict intersection is to improve vehicular mobility and safety by limiting the number of points where vehicles can collide when making traffic maneuvers. This design reduces the potential for collisions by limiting the number of left-turns and moves traffic through an intersection more efficiently, ultimately translating into more signal “green time” and shorter travel times. Compared to conventional intersections, the elimination of left turns substantially reduces the number of potential conflict points and the type/severity of accidents. Reduced conflict intersections can often be constructed within existing rights-of-way, providing a cost-effective option for eliminating left-turning movements and signals.

All build alternatives propose an access management modification at I-26 and West Montague Avenue. Traffic headed west towards West Montague Avenue and Mall Drive would still take the existing exit, but traffic would only have one access point to Mall Drive (via West Montague Avenue), instead of two. Eliminating this access point creates space for a proposed new lane that would channel traffic headed toward I-526, Remount Road and Aviation Avenue into a single own lane. Similarly, traffic would no longer be able to directly merge onto I-26 from Mall Drive because all build alternatives would eliminate this ramp. By removing this ramp, traffic would be able to flow freely, without the obstruction of traffic slowing down to exit.

Alternatives 1, 2, 2A, 5 and 6 at the I-526 at North Rhett Avenue interchange would increase existing access and safety for traffic headed east and west along I-526 and traffic headed to and from Virginia Avenue. Eastbound traffic from Virginia Avenue would have no interaction with I-526 westbound thoroughfare traffic, creating fewer potential conflict points between traffic headed in opposite directions. The weave conflict that arises as traffic merges onto and off the interstate would also be reduced by breaking ramp entrances for North Rhett Avenue into two locations. The low speed loop exit at the North Rhett Avenue at I-526 interchange would be eliminated, along with the weave conflict area between North Rhett Avenue and Virginia Avenue. This design increases safety along I-526 and improves overall capacity levels. Westbound traffic from I-526 headed to Virginia Avenue will not have direct access to Virginia Avenue via a Texas U-turn style ramp, which will also serve traffic from Virginia Avenue headed towards I-526 east.

Alternatives 1, 1A, 2, and 2A at the I-526 and I-26 interchange add collector distributor roads along I-526 to separate movements that create congestion caused by closely spaced ramps and less than desirable weave and merge lane lengths. With Alternatives 1 and 2, access between Rivers Avenue and I-26 via I-526 is eliminated. With Alternatives 1A and 2A, access between Rivers Avenue and I-26 via I-526 is maintained.

Changes in travel patterns and access in West Ashley include a modification of the I-526/Paul Cantrell Boulevard interchange. All alternatives propose a new bridge over Magwood Drive carrying westbound lanes of Paul Cantrell Boulevard, in addition to the widening of the I-526 westbound exit ramp to accommodate for a new bridge, bypassing the Magwood Drive intersection. These changes in access and circulation patterns are anticipated to decrease travel time.

### 5.3 MOBILITY AND ACCESSIBILITY

The proposed project would reduce congestion and improve mobility along the project corridor through the construction of additional travel lanes, wider shoulders to allow vehicles involved in crashes to be moved out of travel lanes, and an improved interchange between I-26 and I-526.

Accessibility evaluates the relative ease desired destinations are reached. In many scenarios, transportation projects can improve accessibility of some locations while reducing the accessibility of others. The proposed improvements would improve the ease with which travelers can reach destinations along the project corridor and broader vicinity. The proposed reduced conflict intersection on Rivers Avenue would not adversely affect the accessibility of commercial uses and side streets along this portion of the roadway.

Without the proposed project, sections of Rivers Avenue are expected to see a 1.8% increase in traffic by 2050. This increase of over 20,000 vehicles per day would likely create increased congestion, making it more difficult to access community facilities and services. The No-Build Alternative would create low adverse impacts on community facilities and services based on increased congestion and related reductions in mobility and accessibility. This increased congestion would also likely increase the number of car accidents on Rivers Avenue, specifically rear-end accidents that commonly occur due to congestion.

Under No-Build conditions, the area along West Montague Avenue, east of I-26, is expected to see a 0.1% increase in traffic by 2050. This increase of approximately 2,000 vehicles per day would create increased congestion, making it more difficult to access community facilities and services such as the Felix Pinckney Community Center or North Charleston Creative Arts Elementary School. Increased congestion would likely lead to an increase in the number of car accidents, specifically rear-end accidents that commonly occur due to added congestion. Because of this predicted increase in accidents, the No-Build Alternative would do little to improve the crash rate of 50 predicted crashes on West Montague Avenue from 2011-2015. The added congestion would therefore create a low-adverse effect on mobility, access and safety in Area 4.

Mobility would also increase with the implementation of either Alternative 5 or 6. Eastbound traffic on Virginia Avenue would no longer need to yield or stop in order to merge onto I-526 and the overall distance for traffic from Virginia Avenue to I-526 would be reduced by approximately 3500 feet per trip. In addition, both build alternatives would reduce the amount of lower speed curves for the Virginia traffic traveling towards I-526, thus creating better flow. The Build alternatives would be expected to help reduce the current levels of congestion and help create the necessary flow to mitigate congestion associated with future growth of the area.

If the No-Build Alternative is selected, the area along North Rhett Avenue, east of I-526, is expected to see a 2.31% increase in traffic by 2050. This increase of approximately 12,000 vehicles per day would create increased congestion, making it more difficult to access community facilities such as the Park Circle public recreation facilities and schools such as North Charleston High School. Virginia Avenue, east of I-526, is also anticipated to see an increase in traffic by 1.86%. Approximately 4,000 more vehicles per day on this corridor would only create further congestion. Because of the likelihood of increased congestion and traffic accidents, safety and mobility would experience a low-adverse impact if the No-Build Alternative was selected.

All the build alternatives anticipate minor changes to the Dorchester Road at I-526 interchange and the Paramount Drive at I-526 interchange, including a slight realignment to the on and off ramps to accommodate widening I-526. The No-Build Alternative would involve no impacts to the mobility, access or safety of the Dorchester Road at I-526 or Paramount Drive at I-526 interchanges. The No-Build scenario would also do little to help alleviate the increasing pressures of about 3,000 vehicles per day on Dorchester Road, west of I-526, by the year 2050. Increased congestion would likely lead to an increase in the number of car accidents, specifically rear-end accidents that commonly occur due to added congestion.

Pedestrian and bicycle mobility and accessibility for all the build alternatives will be temporarily impacted on Dorchester Road, Paramount Drive, and Taylor Street under I-526. Access to and from public transit stops is not anticipated to be impacted by any of the build alternatives. To mitigate project impacts, SCDOT is developing an EJ Community Mitigation Plan to address community needs and priorities, including the need for bicycle and pedestrian facilities. Mitigation measures were based on public feedback and input from the CAC. These improvements may include new and upgraded sidewalks, improved lighting, crosswalks/pedestrian signage, traffic calming, and CARTA transit stop improvements.

To stay in coordination with local and regional bike and pedestrian plans, such as the BCDCOG Long-Range Transportation Plan (LRTP) and the WalkBike BCD Plan, SCDOT is evaluating creating a wide enough interstate to accommodate a potential shared-use path along segments of the I-526 interstate. Considering the goals of the WalkBikeBCD Plan and the BCDCOG LRTP for bicycle and pedestrian mobility, it is recommended that the portion of the overall route parallel to I-526 that should be constructed in the I-526 LCC WEST project should be limited to the Ashley River crossing. Additional details on the potential shared-use path can be found in Chapter 4 of the DEIS.

## 5.4 ECONOMICS

Capacity improvements and improved travel times would result in the potential to expand markets for commercial businesses in the Charleston area and help improve productivity and competitiveness for production-related businesses. Improved travel times can also create other economic benefits such as reduced vehicle operating costs from less stress on vehicles due to traffic.

Although congestion incurs time and money costs, it is a challenge to quantify the economic costs of congestion partly due to the fact that some businesses benefit by locating in high-density commercial corridors which offsets adverse economic costs associated with traveling to and parking in those areas.<sup>22</sup>

Construction of the proposed project would create multi-year (short-term) employment within Charleston County. First round employment (a direct job) includes all jobs created by the hiring of construction firms that execute the projects, or by firms that provide direct inputs (*e.g.*, paving materials, steel, lighting, etc.) to the project. Second round employment (an indirect job) includes employment in companies that provide products to the companies that provide project inputs (*e.g.*, a company that manufactures guardrail is a first round employer, the firm producing sheet metal for the guardrail company is a second round employer). Third round employment (an induced job) includes all jobs generated by incremental customer expenditures due to wages paid for first and second round employees. Given the strong local work force available, it is reasonable to assume that a majority of the first and third round employment would be created in North Charleston and the immediate region. A portion

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<sup>22</sup> National Cooperative Highway Research Program. Economic Implications of Congestion. 2001. [http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_463-a.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_463-a.pdf).

of second round employment may also occur in the region, especially as some manufacturers find it economically beneficial to set up manufacturing near the project site to reduce transportation costs.

## 5.5 CONSTRUCTION/TEMPORARY IMPACTS

Construction of the proposed project would temporarily affect the traveling public and those living along the project corridor. In general, construction of the proposed project would have minor, temporary effects on emergency response times due to possible delays caused by construction and traffic related to construction. Upon completion, the proposed project would aid in the reduction of emergency response times within portions of the project study area and vicinity. In addition, construction of the I-526 LCC WEST project would create temporary impacts to sidewalk facilities on Dorchester Road and Paramount Drive under I-526. The project will also temporarily impact existing pedestrian infrastructure on Taylor Street approaching the Highland Terrace-Liberty Park Community Center. Public transit is not anticipated to be impacted by the project construction.

A traffic control plan will be designed to minimize delays and maximize safety and mobility. All construction operations would be scheduled to minimize traffic delay and the contractor would conform to the standards of the Manual of Uniform Traffic Control Devices for Streets and Highways (FHWA, revised 2012). Construction would be performed to comply with all federal, state, and local laws governing safety, health, and sanitation. Procedures would apply all safeguards, safety devices, protective equipment, and any other needed action reasonably necessary to protect the life and health of employees on the job, the safety of the public, and property in connection with the performance of the work.

## 5.6 CUMULATIVE EFFECTS

As noted in Section 1.1.1, the original construction of I-526 in the 1980's resulted in the bisection of neighborhoods and therefore disruption of community cohesion. According to the 1985 I-526 SCDOT Construction Plans, approximately 61 residences and 9 businesses were relocated. The original construction of I-26 in the 1960's resulted in similar effects, with 1960 I-26 SCDOT Construction Plans including 45 residential relocations. These past actions changed the landscape of the project study area converting natural habitat to developed communities. Additional cumulative effects to communities along the I-526 corridor are anticipated with the potential displacement of approximately 101 residences. A majority of these residential displacements are located in North Charleston due to the commercial nature of West Ashley within the project study area and proximity of homes to the existing interstate.

A review of aerial photography from Google Earth beginning in 1989 indicates an increase in development, most notably with the construction of the Citadel Mall in the 1980s. Subsequent development occurred along Centre Pointe Drive, in addition to construction of the Bon Secours Hospital which opened in 1882 and development along Glen McConnell Parkway.

As noted previously, the original construction of I-526 and I-26 in the 1960's and 1980's resulted in the bisection of neighborhoods and therefore disruption of community cohesion. However, as a majority of West Ashley within the project study area was not yet developed at those times, these cumulative impacts are limited to North Charleston. Cumulative effects on Environmental Justice populations are discussed in the EJ Analysis, DEIS Appendix G.

The proposed improvements will also result in an increase in traffic noise levels in 40 of the 49 Noise Study Areas (NSAs) studied for the noise study report (Appendix K in the DEIS). The increase in sound levels as a result of the proposed improvements is not substantial, and in some cases result in a decrease in sound levels due to parapets on elevated sections. Many locations in the study area currently approach or exceed the Noise Abatement Criteria (NAC). The original construction of I-526 and I-26 through the North Charleston and West Ashley communities and construction and subsequent expansion of the Charleston International Airport, as detailed in Section 3.1.6, generated a substantial increase in highway and air traffic noise. As Charleston and the surrounding areas have increasingly developed, traffic levels and infill development has increased, resulting in an additional increase in noise levels in the communities. The proposed improvements in combination with future projects will contribute to the cumulative noise levels in these communities. Noise abatement measures are preliminarily recommended to reduce traffic noise level increases in North Charleston Area 11 (Centre Pointe Apartments), West Ashley Area 2 (The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane), West Ashley Area 3 (Ashley Harbor), and West Ashley Area 4 (Marsh Cove, Ricefield Townhomes).

## 5.7 NORTH CHARLESTON

### 5.7.1 Community Cohesion

The term “community cohesion” is used to describe the social connections within a community. Transportation projects can affect community cohesion by bisecting neighborhoods and/or isolating a portion of a neighborhood, and the subsequent generation of new development, property value changes, or creating barriers that separate residents from community facilities. The proposed project’s effects on community cohesion was evaluated from direct impact standpoint as well as cumulative effects of past events such as the construction of I-26 and I-526.

As noted in Section 3.1.3, there is a high number of renters within the CIA study area neighborhoods, largely due to the high cost of homeownership in the same areas. The ratio of renters to homeowners can indicate more or less cohesion as there is a transience to renting that could preclude making strong ties with neighbors. However, many long-time renters would likely feel similar levels of cohesion as homeowners given their time living in the neighborhood.

The neighborhoods identified with Environmental Justice (EJ) populations typically have a mix of renters and homeowners, although the composition varies by neighborhood. The EJ neighborhoods appear to have the least amount of community cohesion of all neighborhoods evaluated in this CIA, as evidenced by the lack of regular neighborhood association meetings, public feedback on crime in these neighborhoods, and the sparseness of residents observed out of doors during field surveys. These neighborhoods also experienced adverse community cohesion effects during the original construction of I-526 and I-26. The cumulative effects of past highway projects are discussed further in the EJ Analysis, DEIS Appendix G.

With the exception of identified EJ neighborhoods (Figure 3.9, Area 3, 9 & 12), none of the build alternatives would affect community cohesion in North Charleston neighborhoods (Figure 3.9, Areas 1-2, 4-8, & 10-11). Community impacts to EJ neighborhoods are discussed in detail in the EJ Analysis, DEIS Appendix G.

### 5.7.2 Visual and Aesthetics

With the exception of affected EJ neighborhoods in Area 3 (Figure 3.9), the visual and aesthetic character of the North Charleston neighborhoods within the CIA study area would not be directly altered by the build alternatives. The EJ neighborhoods would experience a *low* level of permanent visual changes to the existing environment because the existing road already sits above many of the affected communities. Visual and aesthetic



impacts to EJ neighborhoods and proposed mitigation are discussed in the Visual Impact Assessment, DEIS Appendix E.

Noise walls are preliminarily recommended for Area 11: Centre Pointe Apartments. The noise wall would alter views of the road from the impacted receptors, however, would not be a departure from the character of the highly developed and urbanized project setting. Addition details on the noise impacts and noise walls can be studied on Appendix K of the DEIS.

### 5.7.3 Neighborhoods

This section discusses impacts to each neighborhood in the North Charleston portion of the CIA study area. Potential impacts to EJ neighborhoods are discussed below and in further detail in the EJ Analysis, DEIS Appendix G. Noise abatement measures for one location in North Charleston is preliminarily recommended for construction: NW 25 at the Center Pointe Apartments (Area 11). A final decision on noise wall construction will be made upon completion of the constructability review, project final design and the public involvement process. All North Charleston Noise Study Areas (NSA) are depicted in Figure 5.7.

#### 5.7.3.1 Neighborhood Impact Summary Table

Table 5.1 includes the anticipated impacts to each neighborhood area in North Charleston, defined in Figure 3.7. If multiple areas anticipate the same impacts, they were grouped together in the table. Area 3, in contrast, was broken up by neighborhood since each neighborhood is anticipating different impacts within Area 3.

**Table 5.1: Summary of Direct Impacts for North Charleston**

Area 1: Oak Grove, Oak Grove West, Singing Pines, Boland Park, Fair Haven Trailer Park						High Adverse Impact
						Medium Adverse Impact
						Low Adverse Impact
						Net Positive
						No Anticipated Impact
						Studies Ongoing
Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD	
Land Use						
Community Cohesion						
Community Facilities and Services						
Visual/Aesthetics						
Residential Acquisitions						
Noise	NSA-37 - increase in Design Year 2050 range from -1 to 2* dB(A)					No**
Area 2: Charleston Farms						
Type of Impact	ALT 2A	ALT 5	ALT 6		NO-BUILD	
Land Use						
Community Cohesion						
Community Facilities and Services						
Visual/Aesthetics						
Residential Acquisitions	1 single family home	1 single family home	1 single family home			
Noise	NSA-31,NSA-31a,NSA-33,and NSA-33a - increase in Design Year 2050 range from -3 to 2dB(A)*.					No**
Area 3(a): Russelldale						
Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD	
Land Use						
Community Cohesion						
Community Facilities and Services	1 Comm Ctr	1 Comm Ctr 1 Church	1 Comm Ctr	1 Comm Ctr 1 Church		
Visual/Aesthetics						

Residential Acquisitions	4 apt buildings 1 single-family home	5 apt buildings 2 single-family homes 1 duplex 1 triplex	4 apt buildings 1 single-family home 1 mobile home	5 apt buildings 2 single-family homes 1 duplex 1 triplex	
Business Acquisitions		1		1	
Noise	NSA-26 thru NSA-27 & NSA-37a – increases in Design Year 2050 range from -4 dB(A) to 5*				No**
<b>Area 3(b): Highland Terrace</b>					
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 1A</b>	<b>ALT 2</b>	<b>ALT 2A</b>	<b>NO-BUILD</b>
Land Use					
Community Cohesion					
Community Facilities and Services	1 Comm Ctr*	1 Comm Ctr*	1 Comm Ctr*	1 Comm Ctr*	
Visual/Aesthetics					
Residential Acquisitions	11 single family homes	12 single family homes 1 mobile home	13 single family homes 1 mobile home	12 single family homes 1 mobile home	
Business Acquisitions					
Noise	NSA-26 thru NSA-27 and NSA-37a in Design Year 2050 range from -4 dB(A) to 5 dB(A)*				No**
<b>Area 3(c): Liberty Park</b>					
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 1A</b>	<b>ALT 2</b>	<b>ALT 2A</b>	<b>NO-BUILD</b>
Land Use					
Community Cohesion					
Community Facilities and Services	1 Comm Ctr* 1 Church	1 Comm Ctr* 2 Churches	1 Comm Ctr* 1 Church	1 Comm Ctr* 2 Churches	
Visual/Aesthetics					
Residential Acquisitions	11 duplexes 3 mobile homes 23 single family homes	11 duplexes 3 mobile homes 26 single family homes	8 duplexes 3 mobile homes 19 single family homes	11 duplexes 3 mobile homes 26 single family homes	
Noise	NSA-26 thru NSA-27 and NSA-37a in Design Year 2050 range from -4 dB(A) to 5 dB(A)*				No**
<b>Area 3(d): Ferndale</b>					
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 1A</b>	<b>ALT 2</b>	<b>ALT 2A</b>	<b>NO-BUILD</b>
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions	12 mobile homes	12 mobile homes	6 mobile homes	12 mobile homes	
Noise	NSA-26 thru NSA-27 and NSA-37a in Design Year 2050 range from -4 dB(A) to 5 dB(A)*				No**
<b>Area 4: Morningside, Liberty Hill, Oak Terrace Preserve, Cameron Terrace West</b>					
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 1A</b>	<b>ALT 2</b>	<b>ALT 2A</b>	<b>NO-BUILD</b>
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions					
Noise	NSA-30 – increase in Design Year 2050 range from 0 to 1 dB(A)*				No**
<b>Area 5: Park Circle, Oak Park, Cameron Terrace &amp; Manor, Palmetto West, Palmetto Gardens</b>					
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 1A</b>	<b>ALT 2</b>	<b>ALT 2A</b>	<b>NO-BUILD</b>
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions					
Noise	NSA-32, NSA-32a, & NSA-34 – increase in Design Year 2050 range from -1 to 3 dB(A)*				No**

<b>Area 6: Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge 2</b>					
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 1A</b>	<b>ALT 2</b>	<b>ALT 2A</b>	<b>NO-BUILD</b>
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions					
Noise	NSA-21 and NSA-22 – increase in Design Year 2050 range from -1 to 4 dB(A)*				No**
<b>Area 7: Wando Woods</b>					

Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions					
Noise	NSA-18 & NSA-20 - increases in Design Year 2050 range from 1 to 3 dB(A)*				No**
<b>Area 8: Plantation Isles, Reverie on the Ashley</b>					
Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions					
Noise	N/A- Outside of the limits of the noise study, far from the proposed roadway improvements				No**
<b>Area 9: West Ada Ave, East Ada Ave, Highpoint Road</b>					
Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions			1 single family		
Noise	NSA-16 & NSA-17 - increases in Design Year 2050 range from 1 to 4 dB(A)*				No**
<b>Area 10: Brentwood, Wayln</b>					
Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions					
Noise	N/A- Outside of the limits of the noise study, far from the proposed roadway improvements				No**
<b>Area 11: Centre Pointe Apartments</b>					
Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions					
Noise	NSA-25 – increases in Design Year 2050 ranges from 1 to 4 dB(A)*				No**
<b>Area 12: Camps</b>					
Type of Impact	ALT 1	ALT 1A	ALT 2	ALT 2A	NO-BUILD
Land Use					
Community Cohesion					
Community Facilities and Services					
Visual/Aesthetics					
Residential Acquisitions			4 apt buildings		
Noise	NSA-25 – increases in Design Year 2050 ranges from 1 to 4 dB(A)*				No**

NOTE: The proposed project would relocate the Highland Terrace/Liberty Park Community Center. This relocation is shown in the table for both neighborhoods as both neighborhoods would experience adverse effects associated with the community center's relocation. A noise analysis was developed for the Recommended Alternative; direct impacts to North Charleston neighborhoods from increased noise are detailed in Sections 5.7.3.2 through 5.7.3.13. Noise Study Area (NSAs) are shown in Figure 5.7 and in the DEIS Appendix K, Detailed Noise Analysis.

\*Existing conditions approach or exceed the NAC for residential land use. See Sections 5.7.3.2 through 5.7.3.13 for the number of existing receptors that approach or exceed the NAC.

\*\*With the No-Build scenario there are receptors that approach or exceed the NAC, however, per FHWA guidance, the receptors are not considered impacted without a project (see Detailed Noise Analysis in DEIS Appendix K).



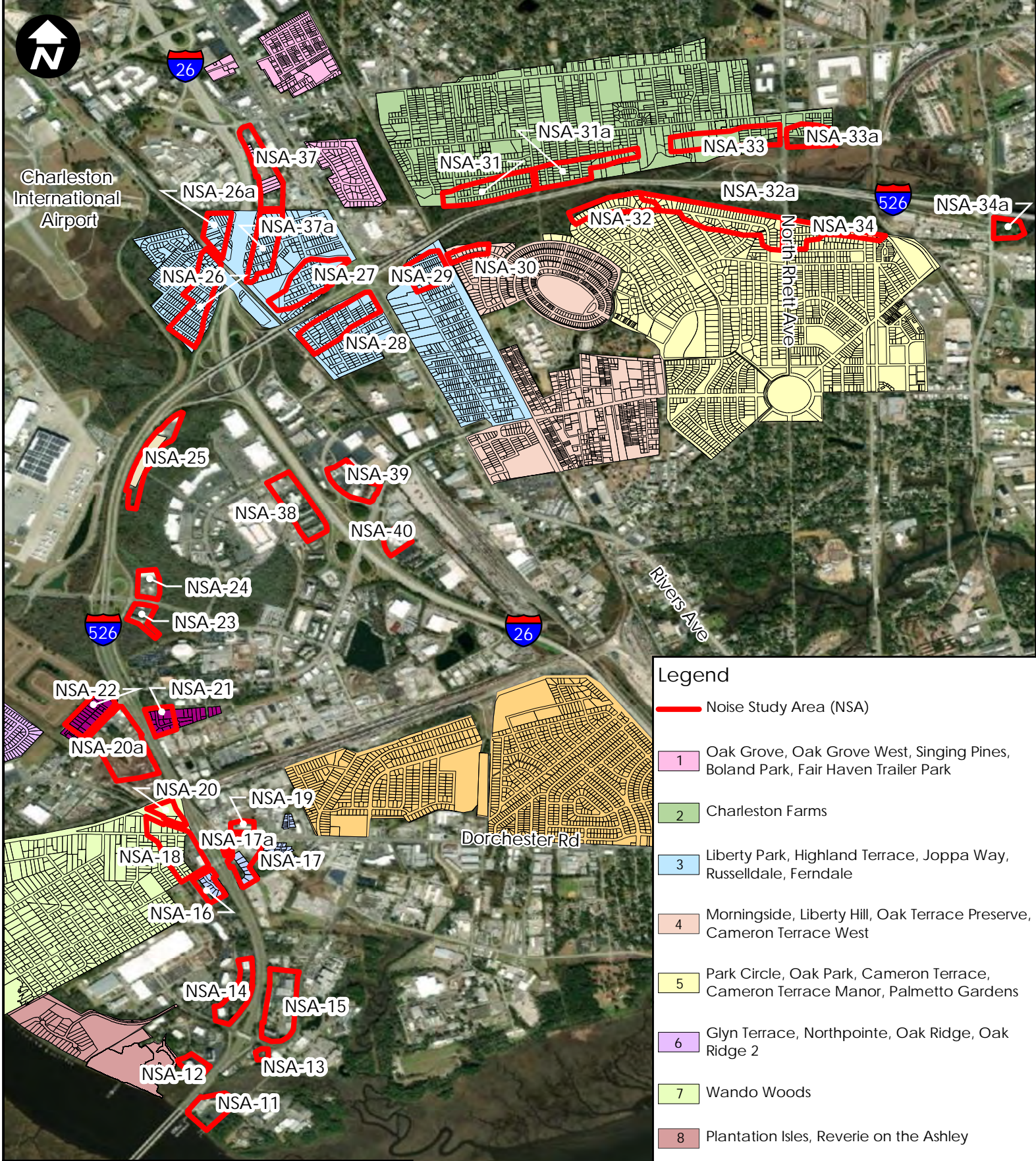
Charleston International Airport



Rivers Ave

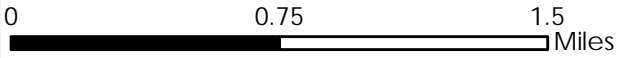
Dorchester Rd

Ashley River



Legend

-  Noise Study Area (NSA)
-  1 Oak Grove, Oak Grove West, Singing Pines, Boland Park, Fair Haven Trailer Park
-  2 Charleston Farms
-  3 Liberty Park, Highland Terrace, Joppa Way, Russelldale, Ferndale
-  4 Morningside, Liberty Hill, Oak Terrace Preserve, Cameron Terrace West
-  5 Park Circle, Oak Park, Cameron Terrace, Cameron Terrace Manor, Palmetto Gardens
-  6 Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge 2
-  7 Wando Woods
-  8 Plantation Isles, Reverie on the Ashley
-  9 West Ada Ave, East Ada Ave, Highpoint Road
-  10 Brentwood, Waylyn
-  11 Centre Point
-  12 Camps



North Charleston Noise Study Areas  
Figure 5.7  
I-526 Lowcountry Corridor WEST  
Charleston County  
Last Updated on 7/16/2020

### 5.7.3.2 Area 1: Oak Grove, Oak Grove West, Singing Pines, Boland Park, Fair Haven Mobile Home Park

**Noise:** Noise Study Area (NSA) 37 is within Area 1. NW 37 – East of I-26, west of US 52 (Rivers Avenue) and north of the Norfolk Southern Railway. Existing noise levels for NSA 37 range from 63 to 71 dB(A) with 10 of 37 receptors approaching or exceeding Noise Abatement Criteria (NAC) for residential land use. Traffic noise level increases for NSA-37a in Design Year 2050 range from -1 to 2 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners, therefore there will be virtually no perceptible change in sound level in the Design Year. NW 37 was evaluated to provide abatement for 10 impacted receptors. An 1,850-foot-long and 12 to 25-foot high barrier with an area of 43,264 square feet was found to be not cost-effective. While a noise reduction of 5 dB(A) for 100 percent of the 10 impacted receptors was achieved, meeting the criteria for feasibility, the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was not achieved (only 50%). Also, NW 37 exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 37 is \$52,215 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-37 are not recommended.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

### 5.7.3.3 Area 2: Charleston Farms

**Noise:** NSA-31, NSA-31a, NSA-33, and NSA-33a are within Area 2. NSA-31 and NSA-31a are located north of I-526, east of the CSX Railway, north of the Norfolk Southern Railway and east of Attaway Street. NSA-33 and NSA-33a are located north of I-526 and Filbin Creek, south of Sumner Avenue and east of North Rhet Avenue. Existing noise levels for NSA-31, NSA-31a, NSA-33, and NSA-33a range from 59 to 74 dB(A) with 52 of 177 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-31, NSA-31a, NSA-33, and NSA-33a in Design Year 2050 range from -3 to 2 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. NW 31/31a was evaluated to provide abatement for 86 impacted receptors in NSA-31 and NSA-31a, the Charleston Farms community. A 7,734-foot-long and 10-12-foot-high barrier system with a total area of 85,164 square feet was found to be cost-effective. A noise reduction of 5 dB(A) was achieved for 85 impacted receptors (99%), meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal was met for 52 receptors of the benefited receptors in the first two building rows (80%), meeting the criteria for reasonableness. The cost per benefited receptor for NW 31/31a of \$24,634 was within the allowable cost of per benefit (\$30,000). Although NW 31/31a preliminarily met cost-effectiveness criteria, during the constructibility review, additional costs were considered to employ a structure mounted noise wall. The Manual for Assessing Safety Hardware (MASH) standards were published by the American Association of Highway and Transportation Officials. MASH includes the latest standards for all traffic safety hardware including temporary and permanent devices and barriers. The cost needed to achieve MASH compliance for a structure-mounted noise wall on the CD viaduct and other issues related to construction and maintenance rendered NW 31/31a as cost-prohibitive and should not be included for construction in the project.

NSA-33 was not considered for noise abatement as there is only one impacted receptor. NSA-33a was not considered for noise abatement for the impacted townhouse receptors east of North Rhet Avenue at Seaport Drive, due to major power lines and the driveway access at the townhomes.

**Residential Acquisitions:** One residential parcel at 5402 Pennsylvania Drive in Charleston Farms neighborhood, would likely be acquired by implementing Alternative 2A, 5 or 6.

### 5.7.3.4 Area 3: Liberty Park, Highland Terrace, Joppa Way, Russelldale, Ferndale

Area 3 neighborhoods include the key Environmental Justice communities that are expected to be impacted by the I-526 LCC WEST project.

**Noise:** Noise Study Areas NSA-6, NSA-27, NSA-28, NSA-28a, NSA-29 and NSA-37a are within Area 3. Traffic noise level increases for NSA-26 thru NSA-27 and NSA-37a in Design Year 2050 range from -4 dB(A) to 5 dB(A).

- NW 26/26a – NSAs 26 and 26a – West of I-26, east of South Aviation Avenue and adjacent to the Norfolk Southern Railway. Existing noise levels for NSA-26 and NSA-26a range from 63 to 71 dB(A) with 52 of 82 receptors approaching or exceeding NAC for residential land use. A 4,333-foot-long and 25-foot high barrier with an area of 109,976 square feet to provide abatement to the Highland Terrace community was found to be not cost-effective. While a noise reduction of 5 dB(A) for 100 percent of the 46 impacted receptors was achieved, meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal for 81% of the benefited receptors in the first two building rows was achieved, NW 26/26a exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 26/26a is \$62,083 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-26 and NSA-26a are not recommended.
- NW 27 – NSA-27 – North of I-526, east of I-26, south of Filbin Creek and west of US 52 (Rivers Avenue). Existing noise levels for NSA-27 range from 58 to 69 dB(A) with 32 of 75 receptors approaching or exceeding NAC for residential land use. A 5,676-foot-long and 12-25-foot high barrier with an area of 90,046 square feet to provide abatement to the Liberty Park community was found to be not cost-effective. While a noise reduction of 5 dB(A) for 100 percent of the 25 impacted receptors was achieved, meeting the criteria for feasibility, the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was not achieved (37%), NW 27 exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 27 is \$59,464 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-27 are not recommended.
- NW 28 – NSA-28 – South of I-526, east of I-26 and west of US 52 (Rivers Avenue). Existing noise levels for NSA-28 range from 59 to 71 dB(A) with 38 of 100 receptors approaching or exceeding NAC for residential land use. A 5,516-foot-long and 12-25-foot high barrier with an area of 81,787 square feet to provide abatement to the Russelldale community was found to be not cost-effective. While a noise reduction of 5 dB(A) for 100 percent of the 40 impacted receptors was achieved, meeting the criteria for feasibility, the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was not achieved (54%), NW 28 exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 28 is \$36,699 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-28 are not recommended.
- NW 29 – NSA-29 – South of I-526, east of US 52 (Rivers Avenue), south of Filbin Creek and west of the CSX Railroad. Existing noise levels for NSA-29 range from 60 to 67 dB(A) with 15 of 53 receptors approaching or exceeding NAC for residential land use. A 5,491-foot-long and 12-foot high barrier with an area of 65,885 square feet to provide abatement to the Ferndale community was found to be not feasible. The feasibility requirement of 75% of the 30 impacted receptors being benefited was not met (71%). Abatement is not feasible; therefore, consideration of reasonableness is not warranted. Noise abatement measures for NSA-29 are not recommended.
- NW 37a - NSA-37a – East of I-26, west of US 52 (Rivers Avenue), south of Remount Road and south of the Norfolk Southern Railway. Existing noise levels for NSA-37a range from 65 to 69 dB(A) with 38 of 42 receptors approaching or exceeding NAC for residential land use. NW 37a was evaluated to provide abatement for twenty impacted receptors. A 2,310-foot-long and 12 to 25-foot high barrier with an area of 50,441 square feet to provide abatement to the Liberty Park community was found to be not cost-effective. While a noise reduction of 5 dB(A) for 90% percent of the twenty impacted receptors was

achieved, meeting the criteria for feasibility, the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was not achieved (only 43%). Also, NW 37a exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 37a is \$63,051 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-37a are not recommended.

All four affected EJ neighborhoods in Area 3 would experience land use changes associated with the displacement of single-family homes, apartments, mobile homes, and community centers.

**Community Facility Acquisitions:** Two community centers (Highland Terrace-Liberty Park Community Centers) and one church (Enoch Chapel Methodist) would likely be acquired by implementing Alternative 1, 1A, 2, or 2A.

**Residential Acquisitions:** At least 33 single-family homes, four apartment buildings, eight duplexes, and 11 mobile homes in Area 3 would likely be acquired by implementing Alternative 1, 1A, 2, or 2A. The multi-family apartment building and duplex acquisitions would be relocating approximately 35 units.

### 5.7.3.5 Area 4: Morningside, Liberty Hill, Oak Terrace Preserve, Cameron Terrace West

**Noise:** NSA-30 is within Area 4. South of I-526, south of Filbin Creek and east of the CSX railroad. NSA-30 is comprised of single-family residences along Sterrett Street, Monterey Street and Wasp Street in the Cameron Terrace West neighborhood. Existing noise levels for NSA-30 range from 63 to 65 dB(A) with no receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-30 in Design Year 2050 range from 0 to 1 dB(A). For NSA-30 only one (1) receptor will be impacted by traffic noise in the Design Year 2050. Per SCDOT Traffic Noise Abatement Policy (October 10, 2019) for noise abatement to be considered feasible at least three (3) impacted receptors must be benefited. Therefore, noise abatement measures for NSA-30 are not feasible.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

### 5.7.3.6 Area 5: Park Circle, Oak Park, Cameron Terrace, Palmetto West, Cameron Terrace Manor, Palmetto Gardens

**Noise:** NSA-32, NSA-32a, and NSA-34 are located within Area 5. NSA-32 and NSA-32a are located south of I-526, east of Attaway Street, south of Filbin Creek and the Norfolk Southern Railway, east of Parkside Drive and west of North Rhett Avenue. NSA-34 is located south of I-526 and the Norfolk Southern Railway, and east of North Rhett Avenue. Existing noise levels for NSA-32, NSA-32a, and NSA 34 range from 53 to 73 dB(A) with 33 of 143 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-32, NSA-32a, and NSA-34 in Design Year 2050 range from -1 to 3 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. NW 33/32a to provide abatement for NSA-32 and NSA-32a was evaluated. A 4,197-foot-long and 12-foot high barrier with an area of 50,362 square feet was found to be not cost-effective. While a noise reduction of 5 dB(A) for 100 percent of the 37 impacted receptors was achieved, meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal for 85% of the benefited receptors in the first two building rows was achieved, NW 32/32a exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 32/32a is \$34,562 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-32 and NSA-32a are not recommended. Noise abatement measures were not considered for NSA-34 as there is only one impacted receptor.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

#### 5.7.3.7 Area 6: Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge 2

**Noise:** NSA-22 is located within Area 6. NSA-22 is comprised of single family and multi-family residences along Firestone Road and Fargo Street in the CAMPS neighborhood. Noise abatement measures for impacted receptors in NSA-22, R22-1, R22-2, R22-3 and R22-12 will not be feasible due to driveway access along west Montague Avenue and powerlines. NSA-22 is also totally within the 65 dB contour noise levels from the Charleston International Airport.

**Residential Acquisitions:** There would be 4 anticipated multi-family residential acquisitions (8 units total) in this area if Alternative 2 was selected.

#### 5.7.3.8 Area 7: Wando Woods

**Noise:** NSA-18 and NSA-20 are located within Area 7. NSA-18 is located west of I-526, south of Dorchester Road and north of Paramount Drive. NSA-20 is located west of I-526, north of Dorchester Road and south of CSX railway. NSA 18 is comprised of single-family residences along Lysa Avenue, Dorsey Avenue and Ivydale Drive in the Wando Woods neighborhood. Existing noise levels for NSA-18 and NSA-20 range from 59 to 71 dB(A) with 5 of 46 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-18 and NSA-20 in Design Year 2050 range from 1 to 3 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. For receptors in NSA-18, R18-1, R18-2, R18-3 and R18-13 along Paramount Drive, a noise abatement measure will not be feasible due to the driveway access to the College of Charleston and a break at Lysa Avenue. A noise abatement measure would not be possible for the impacted receptors along Dorchester Road due to major power transmission lines crossing Dorchester Road. Also, in order to install a noise wall along Dorchester Road, the right-of-way necessary to build the wall would result in the acquisition of the impacted residences. NSA-20 was not considered for noise abatement as the Kingdom of God Ministries is not impacted by the project.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

#### 5.7.3.9 Area 8: Plantation Isles, Reverie on the Ashley

**Noise:** Area 8 is outside of the limits of the noise study due to the distance from the proposed roadway improvements, therefore no noise level impacts are anticipated.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

#### 5.7.3.10 Area 9: West Ada Ave, East Ada Ave, Highpoint Road

Area 9 neighborhoods include Environmental Justice communities that are expected to be impacted by the I-526 LCC WEST project.

NSA-16 and NSA-17 are located within Area 9. Traffic noise level increases for NSA-16 and NSA-17 in Design Year 2050 range from 1 to 4 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners.



- NSA-16 – West of I-526 and south of Paramount Drive. Existing noise levels for NSA-16 range from 64 to 73 dB(A) with 8 of 10 receptors approaching or exceeding NAC for residential land use. NW 16 was evaluated to provide abatement for eight (8) impacted receptors. An 840-foot-long and 20-foot high barrier with an area of 16,801 square feet was found to be not cost-effective. While a noise reduction of 5 dB(A) for 75 percent of the eight (8) impacted receptors was achieved, meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was achieved, NW 16 exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 16 is \$98,006 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-16 are not recommended.
- NSA-17 - East of I-526 and south of Dorchester Road and east of Paramount Drive. Existing noise levels for NSA-17 range from 65 to 75 dB(A) with 6 of 10 receptors approaching or exceeding NAC for residential land use. NW 17 was evaluated to provide abatement for five (5) impacted receptors. A 2,196-foot-long and 12-19-foot high barrier with an area of 33,913 square feet was found to be not cost-effective. While a noise reduction of 5 dB(A) for 100 percent of the five (5) impacted receptors was achieved, meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was achieved, NW 17 exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 17 is \$237,391 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-17 are not recommended.

**Residential Acquisitions:** One single-family home at 4577 E Ada Avenue in Area 9 would likely be acquired by implementing Alternative 2.

#### 5.7.3.11 Area 10: Brentwood, Waylyn

**Noise:** Area 10 is outside of the limits of the noise study due to the distance from the proposed roadway improvements, therefore no noise level impacts are anticipated.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

#### 5.7.3.12 Area 11: Centre Pointe Apartments

**Noise:** NSA-25 is located within Area 11. NSA-25 is located east of I-526 and west of I-26, across from the Boeing Company and Charleston International Airport. Existing noise levels for NSA-25 range from 54 to 73 dB(A) with 27 of 41 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-25 in Design Year 2050 range from 1 to 4 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. NW 25 – NSA-25 – East of I-526 and west of I-26, across from the Boeing Company and Charleston International Airport. NW 25 was evaluated to provide abatement for 32 impacted receptors in the Centre Pointe Apartments. A 1,650-foot-long and 19-foot-high barrier with an area of 31,350 square feet was found to be cost-effective. A noise reduction of 5 dB(A) was achieved for 30 impacted receptors (94%), meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal was met for 22 receptors of the benefited receptors in the first two building rows (88%), meeting the criteria for reasonableness. Second row receptors that were totally shielded from the roadway by building barriers were not included in the calculation. The cost per benefited receptor for NW 25 of \$28,875 is within the allowable cost of per benefit (\$30,000). NW 25, to provide noise abatement for NSA 25 is preliminarily recommended for construction.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

### 5.7.3.13 Area 12: Camps

Area 12 homes include Environmental Justice communities that are expected to be impacted by the I-526 LCC WEST project.

NSA-21 is located within Area 12.

- NSA-21 is located east of I-526 and south of West Montague Avenue. NSA-22 are located west of I-526 and north of west Montague Avenue. Existing noise levels for NSA-21 and NSA-22 range from 56 to 75 dB(A) with 12 of 36 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-21 and NSA-22 in Design Year 2050 range from -1 to 4 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners, therefore there will be virtually no perceptible change in sound level in the Design Year. NW 21 - NSA-21 - East of I-526 and south of west Montague Avenue. NW 21 was evaluated to provide abatement for sixteen impacted receptors. A 2,333-foot-long and 19-foot high barrier with an area of 44,325 square feet was found to be not cost-effective. While a noise reduction of 5 dB(A) for 75 percent of the 16 impacted receptors was achieved, meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was achieved, NW 21 exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 21 is \$67,451 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-21 are not recommended.

**Residential Acquisitions:** Four apartment buildings in Area 12 would likely be acquired by implementing Alternative 2. The multi-family apartment building and duplex acquisitions would be relocating approximately 9 units.

Recent data was compared to the 2010 census (10 year census data was old but we did cross reference)

## 5.8 WEST ASHLEY

### 5.8.1 Community Cohesion

There is a mix of apartments, townhomes, mobile homes, and single-family homes in the West Ashley portion of the CIA study area. Community cohesion is likely to be higher in owner-occupied homes and townhomes such as those found in Areas 1, 3, 4, 6, and 8. The proposed project would relocate single family homes in Area 3 and 6, and townhomes in Area 4. Given the relatively small number of relocations in comparison to the size of the affected neighborhoods, no adverse effects on community cohesion are anticipated in the West Ashley portion of the CIA study area.

### 5.8.2 Visual and aesthetics

The visual and aesthetic character of the West Ashley neighborhoods within the CIA study area would not be directly altered by the build alternatives. Visual and aesthetic impacts to EJ neighborhoods are discussed in the Visual Impact Assessment, DEIS Appendix E. As noted previously, the proposed improvements are not anticipated to provide notable changes to the visual setting of the project area as the corridor was in place prior to most development in the area and is being widened versus new location construction.

Noise walls are preliminarily recommended in Area 2 (The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane), Area 3 (Ashley Harbor), and Area 4 (Marsh Cove, Ricefield Townhomes). The noise walls would alter views of the road from the impacted receptors, however, would not be a departure from the character of the highly developed and urbanized project setting.

### 5.8.3 Neighborhoods

Further impacts for each alternative are qualified throughout the following sections by color, explained in Table 5.8.1. The sections below describe additional impacts to each of the West Ashley neighborhood areas described in Section 3.2.7. All West Ashley Noise Study Areas (NSA) are depicted in Figure 5.7.

#### 5.8.3.1 Neighborhood Impact Summary Table

Table 5.2 includes the anticipated impacts to each neighborhood area in West Ashley, defined in Figure 3.11. If multiple areas anticipate the same impacts, they were grouped together in the table.

**Table 5.2: Summary of Direct Impacts for West Ashley**

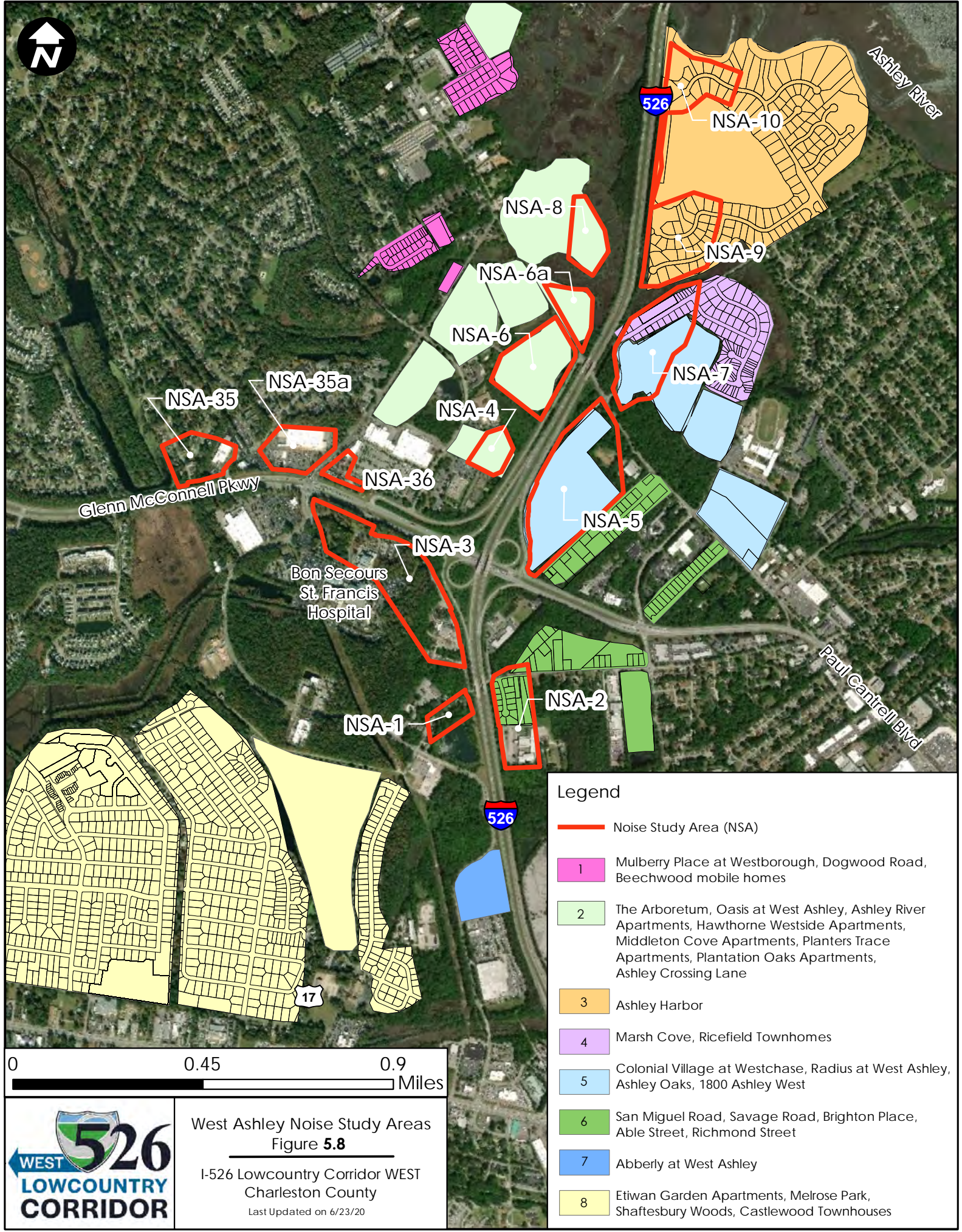
Area 1: Mulberry Place at Westborough, Double Oak, Dogwood Road, Beechwood mobile homes			
Type of Impact	ALT 1	ALT 2	NO-BUILD
Land Use			
Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions			
Noise	N/A- Outside of the limits of the noise study, far from the proposed roadway improvements		No**
Area 2: The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane			
Type of Impact	ALT 1	ALT 2	NO-BUILD
Land Use			
Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions			
Noise	NSA-4, NSA-6, & NSA-6a - increases in Design Year 2050 range from 1 to 5 dB(A)*		No**
Area 3: Ashley Harbor			
Type of Impact	ALT 1	ALT 2	NO-BUILD
Land Use			
Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions	3 single family homes	2 single family homes	
Noise	NSA-9 and NSA-10 - in Design Year 2050 increases range from 2 to 4 dB(A)*		No**
Area 4: Marsh Cove, Ricefield Townhomes			
Type of Impact	ALT 1	ALT 2	NO-BUILD
Land Use			
Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions	2 townhome buildings (6 units)	1 townhome building (3 units)	
Noise	NSA-7 - in Design Year 2050 increases range from 2 to 4 dB(A)*		No**
Area 5: Colonial Villae at Westchase, Radius at West Ashley, Ashley Oaks, 1800 Ashley West			
Type of Impact	ALT 1	ALT 2	NO-BUILD
Land Use			
Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions			
Noise	NSA-5 & NSA-7— increases in Design Year 2050 range from 2 to 5 dB(A)*		No**
Area 6: San Miquel Road, Savaae Road, Briahnton Place, Able Street, Richmond Street			
Type of Impact	ALT 1	ALT 2	NO-BUILD
Land Use			

Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions	1 single family home		
Noise	NSA-2 - increases in Design Year 2050 range from 2 to 4 dB(A)*		No**
<b>Area 7: Abberly at West Ashley</b>			
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 2</b>	<b>NO-BUILD</b>
Land Use			
Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions			
Noise	N/A – evaluated as part of Mark Clark Expressway project		No**
<b>Area 8: Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, Castlewood Townhouses</b>			
<b>Type of Impact</b>	<b>ALT 1</b>	<b>ALT 2</b>	<b>NO-BUILD</b>
Land Use			
Community Cohesion			
Community Facilities and Services			
Visual/Aesthetics			
Residential Acquisitions			
Noise	N/A- Outside of the limits of the noise study, far from the proposed roadway improvements		No**

NOTE: A noise analysis was developed for the Recommended Alternative; direct impacts to West Ashley neighborhoods from increased noise are detailed in Sections 5.8.3.2 through 5.7.3.9. Noise Study Area (NSAs) are shown in Figure 5.8 and in the DEIS Appendix K, Detailed Noise Analysis.

\*Existing conditions approach or exceed the NAC for residential land use. See Sections 5.8.3.2 through 5.8.3.9 for the number of existing receptors that approach or exceed the NAC.

\*\*With the No-Build scenario there are receptors that approach or exceed the NAC, however, per FHWA guidance, the receptors are not considered impacted without a project (see Detailed Noise Analysis in DEIS Appendix K).



**Legend**

- Noise Study Area (NSA)
- 1 Mulberry Place at Westborough, Dogwood Road, Beechwood mobile homes
- 2 The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane
- 3 Ashley Harbor
- 4 Marsh Cove, Ricefield Townhomes
- 5 Colonial Village at Westchase, Radius at West Ashley, Ashley Oaks, 1800 Ashley West
- 6 San Miguel Road, Savage Road, Brighton Place, Able Street, Richmond Street
- 7 Abberly at West Ashley
- 8 Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, Castlewood Townhouses

0 0.45 0.9 Miles



**West Ashley Noise Study Areas**  
**Figure 5.8**  
 I-526 Lowcountry Corridor WEST  
 Charleston County  
 Last Updated on 6/23/20

Note: Single family residential areas are shown with parcel boundaries, while multi-family residential areas are shown as solid shapes

### 5.8.3.2 Area 1: Mulberry Place at Westborough, Double Oak, Dogwood Road, and Beechwood mobile homes

**Noise:** Area 1 is outside of the limits of the noise study due to the distance from the proposed roadway improvements, therefore no noise level impacts are anticipated.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

### 5.8.3.3 Area 2: The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane

**Noise:** NSA-4, NSA-6, NSA-6a and NSA-8 are located within Area 2. Traffic noise level increases for NSA-4, NSA-6, and NSA-6a in Design Year 2050 range from 1 to 5 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners.

NW 4/6 - NSA-4 and NSA-6 – West of I-526 between Paul Cantrell Boulevard and Ashley River Road in West Ashley. Existing noise levels for NSA-4 and NSA-6 range from 42 to 71 dB(A) with 56 of 385 receptors approaching or exceeding NAC for residential land use. NW 4/6 was evaluated to provide abatement for 98 impacted receptors in the Arboretum Condominiums and Plantation Oaks Apartments. A 2,640-foot-long and 20-foot-high barrier with an area of 52,796 square feet was found to be cost-effective. A noise reduction of 5 dB(A) was achieved for 77 impacted receptors (79%), meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal was met for 46 of the benefited receptors in the first two building rows (82%), meeting the criteria for reasonableness. Second row receptors that were totally shielded from the roadway by building barriers were not included in the calculation. The cost per benefited receptor for NW 4/6 of \$8,675 is within the allowable cost of per benefit (\$30,000). NW 4/6, to provide noise abatement for NSAs 4 and 6 is preliminarily recommended for construction. A final decision on noise wall construction will be made upon completion of the project final design and the public involvement process.

NW 6a/8 - NSA-6a and NSA-8 – West of I-526 between Ashley River Road and the Ashley River in West Ashley. Existing noise levels for NSA-6a and NSA-8 range from 48 to 71 dB(A) with 29 of 217 receptors approaching or exceeding NAC for residential land use. NW 6a/8 was evaluated to provide abatement for 71 impacted receptors in the Planters Trace Apartments and the Middleton Cove Apartments. A 3,000-foot-long and 16-foot-high barrier with an area of 48,001 square feet was found to be cost-effective. A noise reduction of 5 dB(A) was achieved for 68 impacted receptors (96%), meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal was met for 35 benefited receptors in the first two building rows (92%), meeting the criteria for reasonableness. Second row receptors that were totally shielded from the roadway by building barriers were not included in the calculation. The cost per benefited receptor for NW 6a/8 of \$10,701 is within the allowable cost of per benefit (\$30,000). NW 6a/8, to provide noise abatement for NSAs 6a and 8, is preliminarily recommended for construction. A final decision on noise wall construction will be made upon completion of the project final design and the public involvement process.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

### 5.8.3.4 Area 3: Ashley Harbor

**Community Facilities and Services:** There are no anticipated community facility relocations with the build alternatives or the No-Build alternative in this area. There is, however, a chance that the right of way for any of the build alternatives would encroach on the parking lot to the private tennis courts in the Ashley Harbor neighborhood. It is also anticipated that the neighborhood boat landing parking lot and storage at the Bull Creek access point may face encroachment if a build alternative is implemented. These parking lots may be marginally reduced, but the overall function of each community resource would not be tainted, so relocation would not be necessary.

**Noise:** NSA-9 and NSA-10 are located within Area 3. Existing noise levels for NSA-9 and NSA-10 range from 57 to 76 dB(A) with 10 of 53 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-9 and NSA-10 in Design Year 2050 range from 2 to 4 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. NW 7/9/10 – NSAs 7, 9 and 10– East of I-526 and north of Ashley Harbor. NW 7/9/10 was evaluated to provide abatement for 59 impacted receptors in the Ashley Oaks Apartments and Ashley Harbor community. A 4,560-foot-long and 13-foot-high barrier with an area of 59,280 square feet was found to be cost-effective. A noise reduction of 5 dB(A) was achieved for 47 impacted receptors (80%), meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal was met for 34 receptors of the benefited receptors in the first two building rows (81%), meeting the criteria for reasonableness. Second row receptors that were totally shielded from the roadway by building barriers were not included in the calculation. The cost per benefited receptor for NW 7/9/10 of \$14,820 is within the allowable cost of per benefit (\$30,000). NW 7/9/10, to provide noise abatement for NSAs 7/9/10 is preliminarily recommended for construction.

**Residential Acquisitions:** Any homes adjacent to I-526 in the Ashley Harbor neighborhood face risk of acquisition with the implementation of any of the build alternatives due to the close proximity of the homes to I-526. The anticipated acquisitions include two residential parcels located at the following addresses in the Ashley Harbor neighborhood: 1701 Seignious Drive and 1710 Southport Drive. While these relocations may ultimately depend on the outcome of the noise and drainage studies, it is likely they would be acquired as a part of any of the build alternatives.

### 5.8.3.5 Area 4: Marsh Cove, Ricefield Townhomes

**Noise:** NSA-7 is located within Area 4. Existing noise levels for NSA-7 range from 47 to 69 dB(A) with 18 of 245 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-7 in Design Year 2050 range from 2 to 4 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. NW 7/9/10 is described in Section 5.8.3.4 Area 3.

**Residential Acquisitions:** The anticipated acquisitions included in any of the build alternatives include two residential parcels located at the following addresses in the Ricefield Townhome neighborhood: 71 Ashley Hall Plantation Road and 75 Ashley Hall Plantation Road. While these relocations may ultimately depend on the outcome of the noise and drainage studies, it is likely they would be acquired as a part of any of the build alternatives.

### 5.8.3.6 Area 5: Colonial Village at Westchase, Radius at West Ashley, Ashley Oaks, 1800 Ashley West

**Noise:** NSA-5 and NSA-7 are located within Area 2. Existing noise levels for NSA-5 and NSA-7 range from 47 to 71 dB(A) with 59 of 601 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-5 in Design Year 2050 range from 2 to 5 dB(A) and NSA-7 in Design Year 2050 range from 2 to 4 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. NW 7/9/10 is described in Section 5.8.3.4 Area 3. NW 5 – NSA-5 – East of I-526 and north of Paul Cantrell Boulevard. NW 5 was evaluated to provide abatement for 85 impacted receptors in the residences along Richmond Street and the Colonial Village at Westchase Apartments. A 2,969-foot-long and 19-foot-high barrier with an area of 56,415 square feet was found to be cost-effective. A noise reduction of 5 dB(A) was achieved for 84 impacted receptors (99%), meeting the criteria for feasibility, and the 8 dB(A) noise reduction goal was met for 91 receptors of the benefited receptors in the first two building rows (85%), meeting the criteria for reasonableness. Second row receptors that were totally shielded from the roadway by building barriers were not included in the calculation. The cost per benefited receptor for NW 5 of \$10,338 is within the allowable cost of per benefit (\$30,000). NW 5, to provide noise abatement for NSA 5 is preliminarily recommended for construction. NW 7/9/10 is described in Section 5.8.3.4 Area 3.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if any of the build alternatives or the No Build Alternative is implemented.

### 5.8.3.7 Area 6: San Miguel Road, Savage Road, Brighton Place, Able Street, Richmond Street

**Noise:** NSA-2 is located within Area 6. Existing noise levels for NSA-2 range from 61 to 66 dB(A) with one of 19 receptors approaching or exceeding NAC for residential land use. Traffic noise level increases for NSA-2 in Design Year 2050 range from 2 to 4 dB(A). A change of 3 dB is accepted as the smallest difference in level that is easily heard by most listeners. NW 2 - NSA-2 – West of I-526 and surrounding Savage Road. NW 2 was evaluated to provide abatement for nine (9) impacted receptors. A 2,070-foot-long and 25-foot high barrier with an area of 49,409 square feet was found to be not cost-effective. While a noise reduction of 5 dB(A) for 89 percent of the nine (9) impacted receptors was achieved, meeting the criteria for feasibility, the 8 dB(A) noise reduction goal for 80% of the benefited receptors in the first two building rows was not achieved (73%). NW 2 exceeds the allowable cost per benefit (\$30,000). The cost per benefited receptor for NW 2 is \$96,073 and therefore does not meet the criteria for reasonableness. Noise abatement measures for NSA-2 are not recommended.

**Residential Acquisitions:** There would be no anticipated residential acquisition in this area if any of the build alternatives are implemented.

### 5.8.3.8 Area 7: Abberly at West Ashley

**Noise:** The Abberly at West Ashley Apartments are being evaluated as part of the Mark Clark Expressway Extension project.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if the build alternatives or the No Build Alternative is implemented.



### 5.8.3.9 Area 8: Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, Castlewood Townhouses

**Noise:** Area 8 is outside of the limits of the noise study due to the distance from the proposed roadway improvements; therefore no noise level impacts are anticipated.

**Residential Acquisitions:** There would be no anticipated residential acquisitions in this area if the build alternatives or the No Build Alternative is implemented.

## 5.9 ENVIRONMENTAL JUSTICE

An Environmental Justice (EJ) analysis was performed to identify EJ populations early in the planning process and incorporate strategies into the project management plan to engage EJ community members at the onset of the project development process. As a part of this analysis, the impacts for each project alternative were evaluated to determine whether the impacts are disproportionately high and adverse for any of the communities located on the project corridor. Federal Highway Administration (FHWA) Order 6640.23A defines disproportionately high and adverse effects as effects that are “predominately borne by a minority and/or low-income population, or will be suffered by the minority/low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority/non-low-income population.”

Environmental Justice impacts were analyzed in DEIS Appendix G using the process for NEPA projects set forth in the Federal Highway Administration Environmental Reference Guide (April 2015). The EJ analysis conducted for this project centered on the following areas of focus:

- Identifying EJ populations
- Providing opportunities for meaningful public involvement with EJ populations
- Understanding EJ needs and concerns
- Assessing benefits and burdens of proposed plans
- Assessing whether transportation plans may result in disproportionately high and adverse effects on EJ populations
- Deploying strategies to address such effects, including imbalances and needs

To supplement this discussion, impacts can be assessed and appropriately mitigated by identifying and understanding factors such as:

- Connectivity: Access to jobs, shopping, transit service; pedestrian access; bicycle access
- Mobility: Traffic congestion, travel times
- Safety: Vehicle crashes, bicycle crashes, pedestrian injuries and fatalities, personal security
- Displacements: Residences, businesses, public amenities
- Equity: Investments, costs, maintenance
- Environmental: Air quality, vibration, noise, climate change
- Social: Community cohesion/disruption, isolation
- Aesthetics: Diminution of landscaping, lighting

These factors are discussed below and throughout the CIA, and can be further reviewed in DEIS Appendix G.

### 5.9.1 Direct Impacts

The I-526 corridor was originally constructed in the late 1980’s and resulted in direct impacts to the Russelldale, Liberty Park, Highland Terrace neighborhoods and the homes on Ada Avenue, Seiberling Road, and Ozark Street.

The right-of-way corridor acquired for the highway was very narrow and therefore, there are currently many homes and businesses located in close proximity to the existing interstate structures. Therefore, there are several communities along the corridor that would be directly impacted with any improvements or changes to the interstate corridor. Construction of the West Ashley portion of I-526 preceded development in that area and as such, development accommodated the I-526 corridor and grew around the freeway. The availability of land and a larger offset from I-526 in the West Ashley area is another contributing factor to the disproportionately high number of relocations in the area surrounding the I-526 and I-26 interchange. Direct impacts to the EJ neighborhoods are detailed in Section 5.7.3.4, 5.7.3.10, and 5.7.3.13, and can be further studied in the EJ Analysis in DEIS Appendix G.

## 5.9.2 Indirect and Cumulative Impacts

Indirect community impacts from transportation projects are typically associated with land use changes that occur as a result of the project. In these cases, the transportation project may provide new access to previously undeveloped land or provide additional capacity resulting in shorter commutes from surrounding areas. The proposed freeway widening, improved I-26 / I-526 interchange, and associated improvements on Rivers Avenue at Aviation Drive would not alter existing land use within affected EJ neighborhoods or immediate vicinity. Because the project corridor and vicinity are already developed, land use changes along the project corridor and vicinity are occurring as part of City-led development and local planning initiatives rather than induced land use changes associated with the proposed project.

The EJ neighborhoods have been impacted numerous times in the past from interstate construction projects. Currently, there are homes and apartment complexes located in very close proximity to the existing interstate corridor as a result of previous interstate construction. The location of the interstate construction resulted in residential and business displacements, disrupted community cohesion and connectivity, visual impacts from the elevated highway structure, an increase in pressure to sell land to developers, and a decrease in the overall affordable housing stock and quality of living. Further detail on cumulative impacts can be found in the Indirect and Cumulative Effects Assessment in DEIS Appendix F.

## 5.10 IMPACTS TO BUSINESS

### 5.10.1 North Charleston

Beginning at the eastern project terminus and traveling westward on I-526, the following is a summary of the anticipated I-526 LCC WEST project business impacts, including relocations, encroachments and access impediments. Measures to avoid relocations or minimize encroachment effects for the selected alternative would be evaluated during final design. The Virginia Avenue at I-526 interchange improvements for either Alternatives 1, 1A, and 2A would include encroachment impacts to the storage and parking at *All Points Transport* and relocation to *Demolition Environmental Company*. Depending on further drainage and noise studies, the anticipated encroachment impacts at *All Points Transport* may be substantial enough to warrant relocation. Traveling further west on I-526, the next business impact that would occur with any of the build alternatives is northeast of the I-526 at Rivers Avenue intersection. Two commercially zoned parcels owned by the Sanders Brothers Associates LLP would encounter encroachment impacts, and likely relocation, which would impact operations or storage capacities at the asphalt and concrete manufacturing plant located here. At the southwest quadrant of the I-526 at Rivers Avenue interchange, there is an additional business impact to the *Roper St. Francis Physician Partners - Primary Care* center with the implementation of Alternative 1A or 2A. These alternatives would push the on and

off ramps further out from I-526, causing the Roper St. Francis Physician Partners - Primary Care center to be relocated.

Before continuing southwest towards West Ashley, business impacts along I-26, north to south, will be detailed below. With the implementation of any of the build alternatives, the northernmost terminus of the project, near the I-26 at Aviation Avenue interchange, would see several encroachment impacts to businesses including the partial parking lots at *SC Federal Credit Union*, *Muhler Awnings*, and *Jones Ford*. The *Bank of America* building would anticipate relocation and delivery trucks for the Aviation Square Shopping Center would have difficulty accessing the product drop-off bays behind the building. The access point impact at Aviation Square Shopping Center could potentially be avoided with the implementation of a retaining wall, depending on further noise and drainage studies. Further south on I-26, just south of Remount Road, additional business impacts include relocations to *Propac* (two separate buildings), *Precision Cycle and Watercraft*, *Charleston Dog House*, *Four Corners Woodworking*, *Custom Wood Gifts* (three buildings) and *Warren Fastenings South, Inc.*, and encroachment impacts to the Parker Rigging Company parking lot. *Ross Printing* and the shopping center that contains *At Home*, *The Home Décor Superstore*, *Leslie's Poole Supplies Service & Repair* would be relocated with Alternative 2. There would also be a partial parking lot acquisition to the Zoom Logistics building, making accessibility to the back of the building difficult for large delivery trucks with Alternatives 1, 1A, and 2A. Continuing south along I-26, south of the I-526 at I-26 interchange, several more businesses would anticipate impacts with any of the build alternatives. Impacts to parking lots at Borden Dairy Co. of SC, Interim HealthCare of Charleston, SC, and Kindred at Home are anticipated. Relocations are anticipated at *Smartlinx* and *Maximus Inc.* with Alternatives 1, 1A, and 2A, and also to *First Southeast Reinsurance*, with all build alternatives, of which are within a business park and would likely lose parking to anticipated encroachment. Further south, one relocation is anticipated with the implementation of all build alternatives at Staffmark, impacts to the *Red Lobster* parking lot, and Carolina Promotions with Alternative 2.

Traveling north to the I-526 at I-26 interchange, and heading southwest on I-526, Alternatives 1, 1A, and 2A anticipate encroachment to the *Doubletree by Hilton Hotel* and the *North Charleston Convention Center* parking lots. Access to *CodeLynx* would be impacted as all build alternative would involve cutting off the driveway to the building. Alternate access routes to *CodeLynx* would be evaluated during final design. Anticipated relocations with the implementation of each build alternative along I-526, south of the I-526 at I-26 interchange and east of the Ashley River, include *Cabinets to Go*, *HD Supply White Cap*, *MUSC Children's Health Sleep Lab*, *Pye Barker Fire & Safety*, and *Carolina 1 Real Estate office*, in addition to *Tideland Equipment and Supply* with Alternatives 1, 1A, and 2A and *Moore Beauston & Woodham LLP*, *Zeltwanger LP*, *Cross-Deck*, *LabCorp*, *Charleston County Assessor*, and *AECOM* with Alternative 2. Ramp expansions and widening associated with each build alternative would also create anticipated encroachments to parking lots and lawns along I-526 including those serving *Carolina International Trucks*, *Aerotek*, and *Select Health* with all build alternatives, and additionally *Senior Savings Network*, *SCE&G*, *Sonitrol Security Systems*, *Mungo Homes*, *Johnson Controls*, and *Maxim Healthcare Services* (including a walking path that is likely utilized by employees) with Alternatives 1, 1A, and 2A. Each build alternative would likely avoid the *Rivers Edge Marina* building in North Charleston by installing an easement wall. Docking and storage at the *WO Thomas Jr. Boat Landing* may be impacted by any of the build alternatives. Although measures will be evaluated in final design to avoid impacts, these facilities were knowingly built under a navigational easement encroachment.

### 5.10.2 West Ashley

Continuing southwest, every build alternative includes widening the bridge over the Ashley River to the east. The I-526 corridor, from the Ashley River to the Paul Cantrell Boulevard interchange, includes no direct impacts to businesses. Traveling westbound on Paul Cantrell Boulevard, after exiting from I-526, anticipated business impacts

associated with the build alternatives include encroachment to the *Chick-fil-a* and *McDonalds* parking lot, and the *MUSC Medical Center & Plaza*. Measures to avoid or minimize encroachment effects for the selected alternative would be evaluated during final design.

## 6.0 SUMMARY OF IMPACTS

The Community Impact Analysis described above determined that there would be direct, indirect, and cumulative impacts to the North Charleston and West Ashley area as a result of the I-526 LCC WEST project. The project is anticipated to benefit the overall North Charleston and Charleston areas by relieving traffic congestion and improving operations at the I-26/I-526 interchange and along the I-526 mainline from Paul Cantrell Boulevard to Virginia Avenue. However, impacts are anticipated to be disproportionately high and adverse to low-income or minority Environmental Justice communities due to their close proximity to the existing interstate corridor.

**Travel Patterns** – The build alternatives would create minor travel pattern changes at the I-26 interchange at Aviation Avenue, design, propose an access management modification at I-26 and West Montague Avenue, include a modification of the I-526/Paul Cantrell Boulevard interchange, and the low speed loop exit at the North Rhett Avenue at I-526 interchange would be eliminated, along with the weave conflict area between North Rhett Avenue and Virginia Avenue. These modifications increase safety along I-526 and improves overall capacity levels. Alternatives 1, 1A, 2, and 2A at the I-526 and I-26 interchange add collector distributor roads along I-526 to separate movements that create congestion caused by closely spaced ramps and less than desirable weave and merge lane lengths. With Alternatives 1 and 2, access between Rivers Avenue and I-26 via I-526 is eliminated. With Alternatives 1A and 2A, access between Rivers Avenue and I-26 via I-526 is maintained.

**Mobility and Accessibility** – The proposed project would reduce congestion and improve mobility along the project corridor through the construction of additional travel lanes, wider shoulders to allow vehicles involved in crashes to be moved out of travel lanes, and an improved interchange between I-26 and I-526. The project would create temporary impacts to various sidewalk facilities that transverse under I-526 or I-26. Accessibility to transit is not anticipated to be negatively impacted by the project.

**Economics** – Capacity improvements and improved travel times would result in the potential to expand markets for commercial businesses in the Charleston area and help improve productivity and competitiveness for production-related businesses. Improved travel times can also create other economic benefits such as reduced vehicle operating costs from less stress on vehicles due to traffic.

**Construction/Temporary Impacts** – Construction of the proposed project would temporarily affect the traveling public and those living along the project corridor. In general, construction of the proposed project would have minor, temporary effects on emergency response times due to possible delays caused by construction and traffic related to construction. Upon completion, the proposed project would aid in the reduction of emergency response times within portions of the project study area and vicinity. A traffic control plan will be designed to minimize delays and maximize safety and mobility.

Without mitigation, the anticipated residential and recreational facility displacements are considered to be disproportionately high and adverse impacts, as there are no comparable burdens placed upon other neighborhoods in the broader vicinity of the proposed project. In addition the airport/highway noise, water pollutants, and previous transportation projects, including the original construction of I-526 and I-26, have contributed to the overall cumulative effects that are summarized below.

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Table 6.1 describes the direct, indirect, and cumulative impacts anticipated for the recommended build alternative. Cumulative effects include previous and anticipated actions by local or state governments. Impact categories can be defined by the following:

- Water Quality: Impacts would occur if water quality and stormwater drainage would decrease as a result of the project.
- Community Cohesion: Impacts would occur if the project were to divide communities, resulting in severed community bonding and social interaction
- Environmental Justice: Impacts would occur if minority or low-income communities were adversely and disproportionately impacted by the project
- Land Use: Impacts would occur if existing land use of future land use plans would change as a result of the project (i.e. population growth, easier access to amenities)
- Noise: Impacts would occur if anticipated noise levels associated with the project rise above FHWA's noise abatement criteria
- Community Facilities and Services: Impacts would occur if accessibility to community facilities or availability of community services were hindered due to the project.
- Visual/Aesthetics: Impacts would occur if the project resulted in substantial visual or aesthetic changes on or near the project corridor
- Residential Acquisitions: Impacts would occur if single-family homes, mobile homes, apartment complexes, duplexes, or any other residential home is relocated by the project.
- Business Acquisitions: Impacts would occur if a business is relocated or faces personal property losses, expenses in finding a replacement, and expenses in reestablishing the business due to the project

Table 6.1: Direct, Indirect, and Cumulative Impact Summary for the Recommended Alternative

IMPACT CATEGORY	DIRECT AND INDIRECT IMPACTS			CUMULATIVE EFFECTS			CONCLUSIONS (BASED ON PROJECT ACTIONS PLUS LOCAL-LEVEL ACTIONS)
	Construction	Operations	w/Mitigation	Past Actions	Other Present Actions	Future Actions	
Water Quality	High Adverse Impact	Low Adverse Impact	Net Positive	High Adverse Impact	Low Adverse Impact	Low Adverse Impact	<p><b>MEDIUM ADVERSE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Filbin Creek and other waterbodies listed as “impaired’ and test high for bacteria. City of North Charleston acquiring property along Filbin Creek and developing plans to pursue grant funding for improvements to the creek.</li> <li>Additional impervious surface from project would result in increased stormwater. Preliminary designs include measures to address stormwater associated with the project.</li> </ul>
Community Cohesion	High Adverse Impact	Net Positive	Low Adverse Impact	High Adverse Impact	High Adverse Impact	High Adverse Impact	<p><b>LOW ADVERSE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Gentrification of the North Charleston area has led to a decrease in community cohesion.</li> <li>Past transportation projects bisected existing communities.</li> <li>Proposed displacements would adversely affect community cohesion.</li> <li>Mitigation will provide a larger, centrally-located community center with improved amenities which is anticipated to increase community cohesion in Ferndale, Russelldale, Highland Terrace and Liberty Park.</li> <li>Pressure from developers and the potential for gentrification is expected to persist in the affected EJ neighborhoods regardless of the proposed project’s construction; however, mitigation measures aimed at strengthening community cohesion would offset impacts to community cohesion associated with the proposed project and past transportation projects.</li> </ul>
Environmental Justice	High Adverse Impact	Low Adverse Impact	Low Adverse Impact	High Adverse Impact	Low Adverse Impact	Low Adverse Impact	<p><b>NET POSITIVE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Construction will cause two community center relocations in EJ communities.</li> <li>Over 94% (92 out of 97 residential displacements) are located in an EJ community.</li> <li>Noise abatement measures are not recommended for these areas as the cost per benefitted receptor does not meet the criteria for reasonableness.</li> <li>Future land use in an EJ neighborhood is mapped in local planning initiatives as “Light Industrial District” which is not consistent with current land uses. Proposed mitigation measures focused in community cohesion, preservation, revitalization, and enhancement would help discourage shift in land use away from residential use.</li> <li>Construction will increase the amount of impervious surface in the area. Project design includes stormwater management to avoid exacerbating existing stormwater concerns. Proposed mitigation measures include addressing neighborhood stormwater/flooding issues.</li> <li>The residents of neighborhoods immediately surrounding the I-526 and I-26 interchange are likely to experience greater impacts to the quality of the air they breathe than residents living in areas further removed from high-traffic interchanges like the I-526 and I-26 interchange.</li> <li>Mitigation measures associated with the project will replace and upgrade recreational facilities and amenities, fund additional local affordable housing for displaced residents, improve connectivity and bike/ped infrastructure, provide organizational training and document cultural history to increase community cohesion, provide relocation assistance and career development opportunities, among other commitments to help mitigate disproportionate and adverse impacts to EJ communities.</li> </ul>
Land Use	Net Positive	Net Positive	Net Positive	Low Adverse Impact	Low Adverse Impact	Low Adverse Impact	<p><b>NO ANTICIPATED IMPACTS</b></p> <ul style="list-style-type: none"> <li>Construction would not alter land uses in the vicinity of the I-526/I-26 corridors. Existing land use is already densely developed and primarily an incorporated urban/suburban mixed-use area.</li> <li>Because the project corridor and vicinity are already developed, land use changes along the project corridor and vicinity would occur as part of local planning initiatives rather than induced land use changes associated with the proposed project.</li> </ul>

IMPACT CATEGORY	DIRECT AND INDIRECT IMPACTS			CUMULATIVE EFFECTS			CONCLUSIONS (BASED ON PROJECT ACTIONS PLUS LOCAL-LEVEL ACTIONS)
	Construction	Operations	w/Mitigation	Past Actions	Other Present Actions	Future Actions	
Noise	High Adverse Impact	Low Adverse Impact	Low Adverse Impact	High Adverse Impact	Low Adverse Impact	Low Adverse Impact	<p><b>MEDIUM ADVERSE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Proposed improvements will result in an increase in traffic levels in six areas within North Charleston and seven areas in West Ashley. Noise abatement measures are recommended in one of the impacted areas in North Charleston and three of those in West Ashley. Every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems will be made.</li> <li>Past actions contributing to current ambient noise levels include the airport and associated expansions, proximity to railroads, construction of I-26 and I-526, and increased traffic on these freeways associated with development within Charleston County.</li> </ul>
Community Facilities and Services	High Adverse Impact	Net Positive	Net Positive	Net Positive	Net Positive	Net Positive	<p><b>NET POSITIVE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Construction will cause two community center relocations.</li> <li>Mitigation measures include a large, centrally-located indoor recreational facility with classrooms, meeting rooms, outdoor amenities, and community-focused programs in addition to the creation of two pocket parks with playgrounds, covered shelters, and basketball courts.</li> </ul>
Visual/Aesthetics	Net Positive	Low Adverse Impact	Low Adverse Impact	High Adverse Impact	Low Adverse Impact	Low Adverse Impact	<p><b>LOW ADVERSE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Noise walls are recommended in five areas near the project which will impact visual and aesthetic character of the corridor, however, would not be a departure from the existing character of the highly developed and urbanized project setting.</li> <li>Past actions such as the construction of I-526 and I-26, and the expansion of the Charleston International Airport severely impacted the visual character of EJ neighborhoods.</li> <li>Mitigation measures with this project include aesthetic enhancements to impacted neighborhoods such as directional signage, landscaping, or additional lighting.</li> </ul>
Residential Acquisitions	High Adverse Impact	Net Positive	Net Positive	High Adverse Impact	High Adverse Impact	Net Positive	<p><b>NET POSITIVE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Construction will cause an estimated 97 residential relocations.</li> <li>Mitigation measures include residential relocation assistance to ensure that decent, safe, and sanitary dwellings will be available to all displaced persons.</li> <li>To avoid future indirect/cumulative effects, the proposed right-of-way was set to avoid past issues associated with minimizing footprint that resulted in reduced-size parcels with limited development potential.</li> <li>Up to 130 replacement affordable housing units will be funded and constructed through agreements with local partners. There are a number of local initiatives to increase the amount of affordable in the North Charleston region, which helps offset past actions related to the reduction in affordable housing stock, gentrification, and rising home process and rent.</li> <li>Financial and first-time home buyer counseling will be made available to relocatees and all area residents interested in financial literacy and homeownership in an effort to increase the number of homeowners in affected EJ neighborhoods and positively contribute to community cohesion, preservation, and revitalization.</li> </ul>
Business Acquisitions	High Adverse Impact	Net Positive	Low Adverse Impact	High Adverse Impact	Net Positive	Net Positive	<p><b>LOW ADVERSE EFFECTS</b></p> <ul style="list-style-type: none"> <li>Construction will cause an estimated 16 business relocations.</li> <li>Displaced business owners and tenants will be reimbursed for reasonable moving costs, personal property losses, expenses in finding a replacement, and expenses in reestablishing the business.</li> <li>Relocation counseling will be offered to employees of displaced businesses to minimize economic harm.</li> </ul>



APPENDIX A  
DEMOGRAPHIC DATA



## APPENDIX A: DEMOGRAPHIC DATA

The “Block Group” numbers in the tables below represents a variety of identifying numbers for each Block Group. “45” identifies the state of South Carolina, “019” identifies Charleston County, “003XXX” identifies the tract number, and the last digit “X” identifies the Block Group. Together these numbers make up a unique combination that serves as an identifier for each Block Group, thus in the document they are referenced as “Block Group” numbers.

### A.1 Housing Characteristics for North Charleston in the CIA study area. Source: ACS 2016 5YR.

Block Group	Median Home Value	% Owner Occupied	% Renter Occupied	% Vacant	% No Vehicle
450190033002	\$ 9,999.00	19%	81%	10%	4%
450190033003	\$ 82,100.00	24%	76%	22%	0%
450190033001	\$ 107,500.00	58%	42%	25%	0%
450190035001	\$ 148,200.00	70%	30%	15%	0%
450190031052	\$ 23,400.00	46%	54%	7%	2%
450190033004	\$ 42,400.00	31%	69%	15%	5%
450190039002	\$ 156,400.00	74%	26%	13%	0%
450190034003	\$ 100,500.00	43%	57%	16%	9%
450190035002	\$ 205,700.00	74%	26%	14%	2%
450190034004	\$ 85,700.00	23%	77%	14%	2%
450190031112	\$ 17,500.00	23%	77%	17%	0%
450190035003	\$ 231,200.00	85%	15%	2%	0%
450190038001	\$ 78,800.00	48%	52%	5%	0%
450190038002	\$ 72,900.00	35%	65%	11%	16%
450190038003	\$ 83,600.00	61%	39%	10%	7%
450190039001	\$ 158,400.00	62%	38%	10%	0%
450190031113	\$ 108,900.00	53%	47%	10%	2%
450190031114	\$ 123,400.00	73%	27%	9%	4%
450190031111	\$ 56,000.00	23%	77%	18%	2%

NOTE: Block Group 45190031051 is adjacent to the project corridor; however, demographic data is not included in this table as the residential portion of the Block Group is not adjacent to the project corridor and there are no direct, indirect, or cumulative impacts to the residential area of this Block Group.

**A.2 Employment and Income Characteristics for North Charleston Compared to State and National Averages. Source: ACS 2016 5YR.**

Block Group	Unemployment Rate	Median Household Income	% Below Poverty Level	% Low-Income
450190033002	11%	\$ 16,378.00	87%	76%
450190033003	19%	\$ 25,536.00	71%	65%
450190033001	16%	\$ 25,882.00	51%	45%
450190035001	0%	\$ 53,780.00	18%	24%
450190031052	8%	\$ 27,381.00	69%	75%
450190033004	17%	\$ 30,352.00	67%	68%
450190039002	14%	\$ 53,227.00	44%	37%
450190034003	27%	\$ 19,020.00	65%	74%
450190035002	3%	\$ 57,788.00	28%	25%
450190034004	11%	\$ 25,227.00	69%	60%
450190031112	5%	\$ 23,849.00	51%	50%
450190035003	0%	\$ 52,165.00	16%	16%
450190038001	16%	\$ 35,300.00	26%	18%
450190038002	17%	\$ 20,694.00	53%	60%
450190038003	7%	\$ 32,270.00	28%	56%
450190039001	0%	\$ 47,500.00	14%	18%
450190031113	6%	\$ 41,413.00	17%	54%
450190031114	15%	\$ 51,143.00	21%	30%
450190031111	11%	\$ 28,618.00	16%	56%
South Carolina Average	8%	\$ 46,898.00	17%	37%
USA Average	7%	\$ 55,322.00	15%	33%

NOTE: Block Group 45190031051 is adjacent to the project corridor; however, demographic data is not included in this table as the residential portion of the Block Group is not adjacent to the project corridor and there are no direct, indirect, or cumulative impacts to the residential area of this Block Group.

**A.3 Demographic Characteristics of North Charleston in the CIA study area. Source: ACS 2016 5YR.**

Community	Block Group	Population	% Minority	% Over 65	% LEP
Ferndale	450190033002	869	59%	6%	25%
Russelldale, Ferndale, Liberty Park	450190033003	1035	56%	7%	15%
Singing Pines; Boland Park, Fair Haven Trailer Park, Liberty Park	450190033001	416	56%	24%	0%
Park Circle, Oak Park, Cameron Terrace	450190035001	1067	13%	15%	0%
Oak Grove, Oak Grove West	450190031052	2058	44%	7%	13%
Morningside, Liberty Hill	450190033004	1566	80%	9%	5%
Wando Woods; Plantation Isles and Reverie on the Ashley; West Ada Avenue, East Ada Avenue, Highpoint Road	450190039002	4799	63%	6%	7%

Community	Block Group	Population	% Minority	% Over 65	% LEP
Charleston Farms	450190034003	773	80%	7%	26%
Oak Park, Cameron Terrace, Palmetto Gardens	450190035002	1131	16%	25%	2%
Waylyn	450190038001	1246	88%	14%	0%
Waylyn	450190038002	915	87%	16%	0%
Brentwood	450190038003	1140	69%	18%	0%
Wando Woods	450190039001	543	20%	26%	0%
Park Circle, Charleston Farms	450190034004	2298	64%	4%	13%
Camps	450190031112	970	94%	3%	0%
Glyn Terrace, Northpointe, Oak Ridge	450190031113	1895	90%	12%	8%
Glyn Terrace, Oak Ridge 2	450190031114	741	60%	10%	0%
Oak Terrace Preserve, Cameron Terrace West	450190035003	628	9%	13%	0%
Highland Terrace, Camps	450190031111	1338	66%	16%	0%

NOTE: Block Group 45190031051 is adjacent to the project corridor; however, demographic data is not included in this table as the residential portion of the Block Group is not adjacent to the project corridor and there are no direct, indirect, or cumulative impacts to the residential area of this Block Group.

**A.4 Population in North Charleston by Race. Source: ACS 2016 5YR.**

Block Group	% White	% Black	% American Indian	% Asian	% Pacific Islander	% Other
450190033002	35%	65%	0%	0%	0%	0%
450190033003	43%	57%	0%	0%	0%	0%
450190033001	41%	59%	0%	0%	0%	0%
450190035001	81%	10%	5%	0%	0%	0%
450190031052	54%	41%	0%	0%	0%	5%
450190033004	6%	85%	0%	0%	0%	9%
450190039002	36%	60%	0%	0%	1%	3%
450190034003	26%	62%	2%	0%	0%	10%
450190035002	77%	11%	0%	0%	2%	10%
450190034004	40%	56%	0%	0%	0%	4%
450190031112	10%	73%	0%	0%	0%	17%
450190035003	92%	8%	0%	0%	0%	0%
450190038001	10%	88%	0%	0%	0%	2%
450190038002	7%	93%	0%	0%	0%	0%
450190038003	23%	75%	0%	2%	0%	0%
450190039001	63%	34%	0%	0%	0%	3%
450190031113	20%	59%	0%	6%	0%	15%
450190031114	44%	44%	0%	0%	0%	12%
450190031111	31%	64%	0%	3%	0%	2%
450190031051	42%	54%	0%	0%	0%	4%

**A.5 Housing characteristics for West Ashley in the CIA study area. Source: ACS 2016 5YR.**

Block Group	Median Home Value	% Owner Occupied	% Renter Occupied	% Vacant	% No Vehicle
450190027011	\$ 165,700.00	33%	67%	11%	2%
450190026111	\$ 167,100.00	45%	55%	4%	1%
450190026121	\$ 387,100.00	37%	63%	13%	2%
450190026141	\$ 222,300.00	30%	70%	6%	0%
450190026133	\$ 217,500.00	86%	14%	9%	0%
450190026134	\$ 187,500.00	11%	89%	8%	1%
450190026142	\$ 165,500.00	61%	39%	0%	1%

**A.6 Employment and Income Characteristics for West Ashley Compared to State and National Averages. Source: ACS 2016 5YR.**

Block Group	Unemployment Rate	Median Household Income	% Below Poverty Level	% Low-Income
450190027011	4%	\$ 40,205.00	33%	36%
450190026111	4%	\$ 60,137.00	20%	20%
450190026121	6%	\$ 39,421.00	53%	51%
450190026141	5%	\$ 53,156.00	31%	30%
450190026133	2%	\$ 96,184.00	4%	9%
450190026134	2%	\$ 28,000.00	33%	34%
450190026142	12%	\$ 35,250.00	37%	37%
South Carolina Average	8%	\$ 46,898.00	17%	37%
USA Average	7%	\$ 55,322.00	15%	33%

**A.7 Demographic Characteristics of West Ashley in the CIA study area**

Neighborhood	Block Group	Population	% Minority	% Over 65	% LEP
Oasis at West Ashley, Middleton Cove Apartments, Planters Trace Apartments, Dogwood Road	450190026111	2557	19%	13%	0%
Ashley Harbor; Marsh Cove and the Ricefield Townhomes; Ashley Oaks Apartments, 1800 Ashley West	450190026121	2317	53%	7%	0%
	450190026133	932	7%	24%	0%
Able Street, Richmond Street, Colonial Village at Westchase, The Arboretum, Ashley River Apartments, Hawthorne Westside Apartments, Plantation Oaks	450190026134	2266	26%	24%	2%

Neighborhood	Block Group	Population	% Minority	% Over 65	% LEP
Apartments, Ashley Crossing Lane, Mulberry Place at Westborough, Beechwood Mobile Homes, Grandview Apartments					
San Miguel Road, Savage Road, Brighton Place, Richmond Street, and Able Street; Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, and Castlewood Townhouses	450190026141	3214	29%	9%	2%
Etiwan Garden Apartments, Melrose Park, Savage Road, Castlewood Townhouses	450190026142	737	41%	20%	0%
San Miguel Road, Brighton Place, Abberly at West Ashley, Castlewood Townhouses	450190027011	1191	49%	13%	1%

**A.8 Population in West Ashley by Race. Source: ACS 2016 5YR.**

Block Group	% White	% Black	% American Indian	% Asian	% Pacific Islander	% Other
450190027011	47%	52%	0%	1%	0%	0%
450190026111	82%	16%	0%	0%	0%	2%
450190026121	41%	54%	0%	1%	0%	4%
450190026141	67%	27%	1%	2%	0%	3%
450190026133	91%	9%	0%	0%	0%	0%
450190026134	77%	13%	0%	8%	0%	2%
450190026142	66%	31%	0%	0%	0%	3%



APPENDIX B  
RESOURCES

## APPENDIX B: RESOURCES

I-526 Preliminary Relocation Report

I-526 LCC WEST Public Involvement Plan

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