

3. Existing Conditions and Environmental Consequences

3.3 Socioeconomics and Communities

This chapter describes the existing socioeconomic characteristics (population, households, and employment) of the community study area, and includes a discussion of the existing demographic profile for low-income, minority, elderly, and limited English proficient (LEP) populations. To ensure that potential effects to people and communities are integrated into the decision making process, the National Environmental Policy Act (NEPA) specifically requires the consideration of social and economic impacts of the proposed project. Minority and low-income populations are specifically discussed in this section as well. Existing and future population, households, and employment characteristics of the Carolina Crossroads community study area are discussed in this chapter. Other economic factors that would be anticipated to result from the construction of the alternatives under study in the Final Environmental Impact Statement (FEIS) are also discussed, such as economic output, which involves employment and income; government finances, meaning taxes; and the impacts on the local economy, which includes business access. Potential mitigation measures are included at the conclusion of this chapter.

3.3.1 CHANGES TO THIS CHAPTER SINCE THE DEIS

Since the Draft Environmental Impact Statement (DEIS), this chapter has been revised to update the impacts for the Refined Recommended Preferred Alternative (Refined RPA); and to update the acreage of the project study area due to project design refinement.

3.3.2 WHAT COMMUNITIES ARE IN THE PROJECT STUDY AREA?

The Federal Highway Administration (FHWA) guidance document entitled *Community Impact Assessment: A Quick Reference for Transportation* (FHWA 1996) recommends a process to evaluate the effects of a transportation project on a community and its quality of life. The assessment of effects helps decision-makers ensure that transportation investment addresses concerns and minimizes effects to communities.

The guidebook has various definitions of community, all of which were considered in determining the overall study area for the Community Characterization Report¹ and the Community Impact Assessment.² The guidebook defines community as an area where behavior patterns of individuals or groups of individuals are common and where shared perceptions or attitudes create an identifiable area. Communities may be based on a common characteristic that is not spatial in nature, such as religion, income, ethnicity, etc.

In developing the community study area (CSA) for the Carolina Crossroads, the project team identified neighborhoods and communities within an approximately one mile radius of the I-20/26/126 corridor, and for ease of data collection, used the U.S. Census Bureau tract/Block Group boundaries and Transportation Analysis Zone (TAZ) boundaries which encompass those neighborhoods and communities to delineate the CSA. The Block

¹ South Carolina Department of Transportation (SCDOT). 2016. Carolina Crossroads 1-20/26/126 Corridor Improvements Community Characterization. Prepared by STV and HDR Engineering. Charlotte.

² South Carolina Department of Transportation (SCDOT). 2018. Carolina Crossroads 1-20/26/126 Corridor Improvements Community Impact Assessment. Prepared by STV and HDR Engineering. Charlotte.

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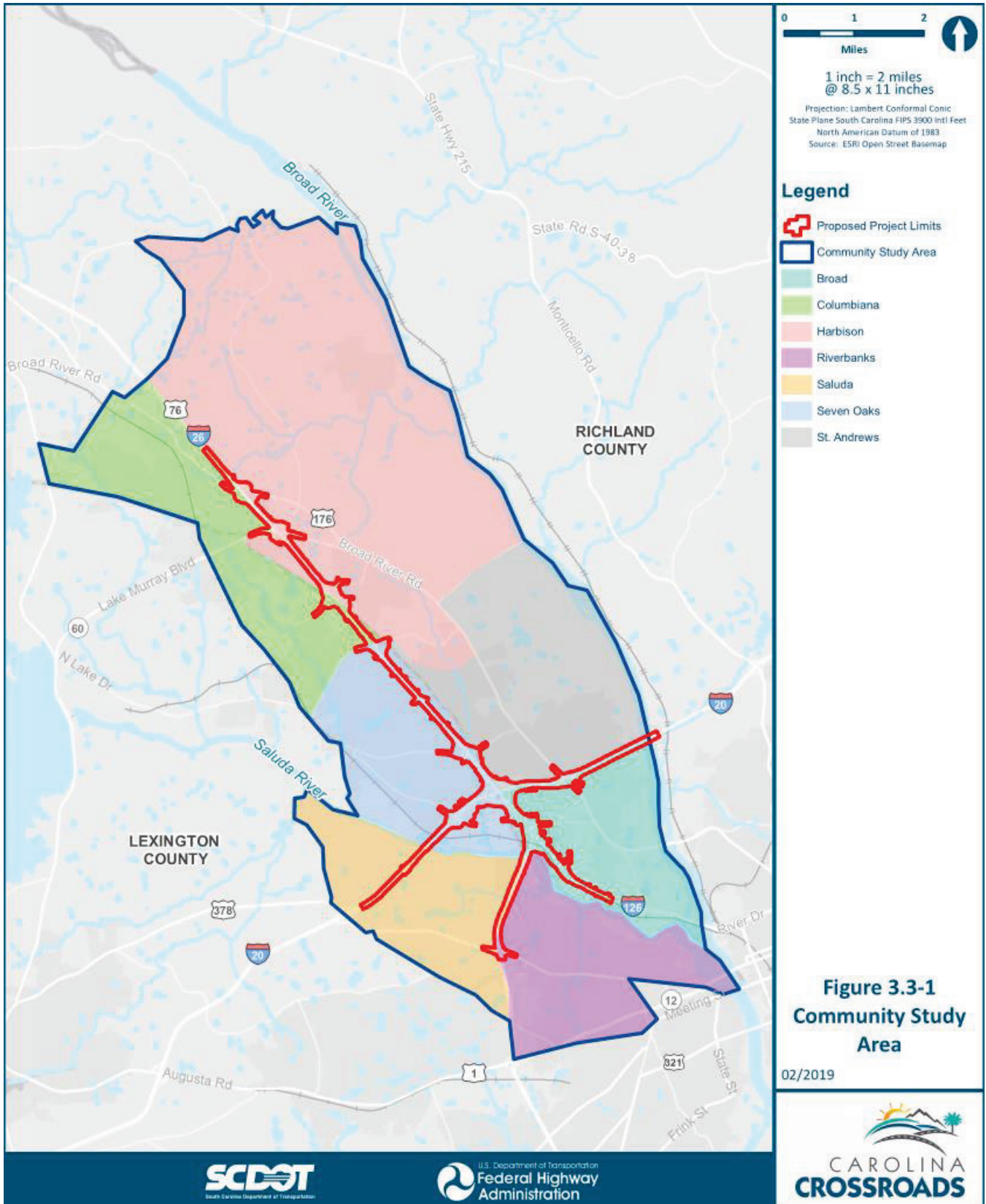
Group and TAZ boundaries also generally follow visible natural or man-made features such as streams, rivers or major roadways.

The CSA is organized into seven smaller, project team-defined communities, which are based on similarities in land use and context, while still following Block Group and TAZ boundaries and visible features. These seven communities include:

- **Columbiana:** Located in the Irmo sub-area of Lexington County and situated west of I-26 and north of Piney Grove Road.
- **Seven Oaks:** Located in the Irmo sub-area of Lexington County positioned west of I-26, south of Piney Grove Road and north of I-20.
- **Saluda:** Located in the West Columbia sub-area of Lexington County, west of the Saluda River and I-26.
- **Riverbanks:** Located in the West Columbia sub-area of Lexington County, between I-26 and I-126.
- **Harbison:** Located in the Dutch Fork sub-area of Richland County, between I-26 and the Broad River.
- **St. Andrews:** Located in the West Columbia sub-area of Richland County, west of the Saluda River and I-26 and just northeast of the I-20/26 interchange.
- **Broad:** Located in the West Columbia sub-area of Richland County, situated between I-20 and I-126.

Data from the smaller communities are used as the foundation for the existing conditions analysis. Block Group and TAZ data are used in the evaluation of demographics, economics and growth trends within the overall CSA and each of the seven communities. These seven communities are described in more detail in later sections of this report. The CSA and communities are shown in Figure 3.3-1.

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3.3.3 WHAT DATA SOURCES AND METHODOLOGIES WERE USED TO CHARACTERIZE THE COMMUNITIES?

Demographic and economic conditions were identified using U.S. Census Bureau data at the county level (Richland and Lexington Counties), tract level and Block Group level.

For socioeconomic trends, 2010 base year data and 2040 horizon year estimates were used. The 2010 data and 2040 population, housing, and employment estimates were obtained from socioeconomic data prepared for the South Carolina Statewide Travel Demand Model (SC SWM), which was developed in July 2014 as part of the South Carolina Multimodal Transportation Plan (SC MTP).³ The socioeconomic data set used originated in version SC SWMV2, build 15061 and dated June 2015. The 2010 county- and state-level population data were obtained from the Census Bureau's 2010 Demographic Profile.⁴

Base year (2010) data and horizon year (2040) estimates were obtained from TAZs that fall entirely within the CSA. TAZs are geographical units used for travel demand modeling. The number of people, households, and jobs were calculated within each community for the years 2010 and 2040. Population, housing, and employment data were also reviewed at county and state levels.

Minority populations include American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian or Other Pacific Islander. Low-income populations were calculated by adding the below poverty population and the near poor population, which are those populations between 100 percent and 149 percent of poverty level, as prescribed by the U.S. Health and Human Services poverty guidelines. The LEP population was calculated by adding all populations that spoke other languages and English less than very well.

Data for the Community Impact Assessment were obtained from a number of sources, including

- map data from Google;⁵
- ESRI World Imagery;⁶
- historical to current USGS 7.5 minute series topographic quadrangles;
- Census Bureau, American FactFinder, 2010 Decennial Census ;
- Census Bureau, American FactFinder, 2009-2013 American Community Survey 5-Year Estimates;
- South Carolina Statewide Travel Demand Model, 2014/2015 version SC SWMV2;
- SCDOT Crash Analysis;
- 2015 IMPLAN Data files for South Carolina and all Counties;
- South Carolina Statewide Travel Demand Model;

³ South Carolina Department of Transportation (SCDOT). 2014/2015. South Carolina Multimodal Transportation Plan, and socio-economic data prepared for the South Carolina Statewide Travel Demand Model (SC SWM) version SCSWV2, build 15061. Prepared by CDM Smith.

⁴ U.S. Census Bureau. 2010. "Decennial Census." American FactFinder. Accessed summer 2015. <http://www.census.gov/>

⁵ Google. 2015. Maps. Accessed summer 2015. <http://www.google.com>.

⁶ ESRI World Imagery. 2015. Accessed August 2015.

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- 2018 Carolina Crossroads Cost and Schedule Risk Assessment;⁷
- published books and articles obtained from regional libraries; and
- local plans and websites.

In addition, information was collected and confirmed during a visit to the CSA in the spring of 2015 and during discussions with local residents at a Community Kickoff Meeting on May 12, 2015; a Scoping Public Meeting on September 10, 2015; an Alternatives Public Information meeting on October 4, 2016; a Reasonable Alternatives Public Meeting on September 19, 2017; a Bush River Road business community meeting on March 1, 2018 and a DEIS Public Hearing on August 23, 2018. Information was also collected via local planner input forms which were emailed to several local planners.^{8,9,10}

3.3.4 WHAT ARE THE EXISTING CHARACTERISTICS OF THE STUDY AREA AND COMMUNITIES?

3.3.4.1 Study Area

The seven communities within the CSA were used as the foundation for the existing conditions analysis and the community characterization process. Block Groups and TAZs were used in the evaluation of demographics, economics and growth trends within the CSA and each of the communities (see Figure 3.3-2 for Block Groups within the CSA).

Demographic and economic data presented in Tables 3.3-1 and 3.3-2 include information related to minority populations, age, Limited-English Proficiency (LEP), zero-vehicle households, median household income, low-income populations, median home value and unemployment. Economic data using medians (household income and home value) may be shown as a range, if the community is made up of more than one Census Bureau tract. Averaging the medians across U.S. Census Bureau tracts skews the data; therefore the range presented more accurately reflects the variations of economic characteristics within each community.

⁷ SCDOT. FHWA Cost Estimate Review. July 2018

⁸ Lexington County Department of Planning, email of Local Planner Input Form to STV, February 2, 2018.

⁹ Central Midlands Council of Governments, email of Local Planner Input Form to STV, February 7, 2018.

¹⁰ West Columbia Planning and Zoning, email of Local Planner Input Form to STV, January 31, 2018.

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Table 3.3-1 Study Area Demographic Profile

Community	% Overall Minority	% Black or African American	% American Indian and Alaska Native	% Asian	% Native Hawaiian and Other Pacific Islander	% Some other race alone	% Two or more races	% Hispanic	% LEP	% Age: 65 and over	% Zero Vehicle Households
Lexington County	23.3%	14.3%	0.2%	1.4%	0.0%	0.1%	1.7%	5.6%	3.2%	12.8%	4.6%
Columbiana	34.7%	23.3%	0.6%	2.6%	0.2%	0%	1.3%	6.8%	1.4%	13.2%	2.9%
Seven Oaks	40.2%	30.7%	0%	1.7%	0.2%	0.1%	3.1%	4.5%	2.4%	38.1%	2.5%
Saluda	24.2%	12.5%	0%	0.7%	0%	0.1%	1.8%	9.2%	5.8%	29.0%	10.2%
Riverbanks	34.8%	17.2%	0.6%	1.7%	0%	0.1%	0.8%	14.5%	10.2%	10.2%	10.2%
Richland County	55.1%	45.6%	0.1%	2.4%	0.1%	0.1%	1.9%	4.9%	3.0%	32.5%	6.9%
Harbison	43.0%	35.1%	0.2%	2.1%	0%	0.1%	2.6%	2.9%	1.9%	9.7%	5.4%
St. Andrews	81.1%	73.7%	0.2%	1.2%	0%	0%	3.5%	2.5%	2.4%	4.3%	11.6%
Broad	65.1%	59.1%	0.4%	2.9%	0%	0%	0.4%	2.3%	2.7%	7.1%	6.5%
Study Area	50.4%	41%	0.3%	1.9%	0.1%	0%	2.2%	5.1%	3.2%	12.6%	6.7%
South Carolina	35.9%	27.6%	0.3%	1.3%	0.04%	0.1%	1.5%	5.2%	3.0%	14.2%	7.0%

Source: U.S. Census Bureau, 2010 Demographic Profile and American Community Survey 5-year Estimates (2009-2013) Tract and Block Group data. Population numbers have been rounded to the nearest hundred.

Table 3.3-2 Study Area Economic Profile

Community	Median household income	% Low - income	Median home value	% Unemployed
Lexington County	\$54,100	23.1%	\$140,100	6.2%
Columbiana	\$46,700 - \$71,000	21.2%	\$123,600 - \$191,000	1.6%
Seven Oaks	\$40,900 - \$79,600	19.4%	\$134,100 - \$166,900	1.5%
Saluda	\$46,900	20.9%	\$208,100	0.8%
Riverbanks	\$26,500 - \$78,300	28.6%	\$81,100 - \$174,700	2.6%
Richland County	\$48,400	27.9%	\$149,800	7.0%
Harbison	\$43,400 - \$65,300	16.5%	\$112,300 - \$180,000	1.5%
St. Andrews	\$19,700 - \$41,000	46.9%	\$79,000 - \$106,800	3.4%
Broad	\$29,800 - \$44,500	40.5%	\$106,600 - \$126,300	3.1%
Study Area	\$19,700 - \$79,600	27.1%	\$79,000 - \$208,100	2.9%
South Carolina	\$44,800	17.7%	\$137,400	6.9%

Source: U.S. Census Bureau, 2010 Demographic Profile and American Community Survey 5-year Estimates (2009-2013) Tract and Block Group data. Median Household Income and Home Value numbers have been rounded to the nearest hundred.

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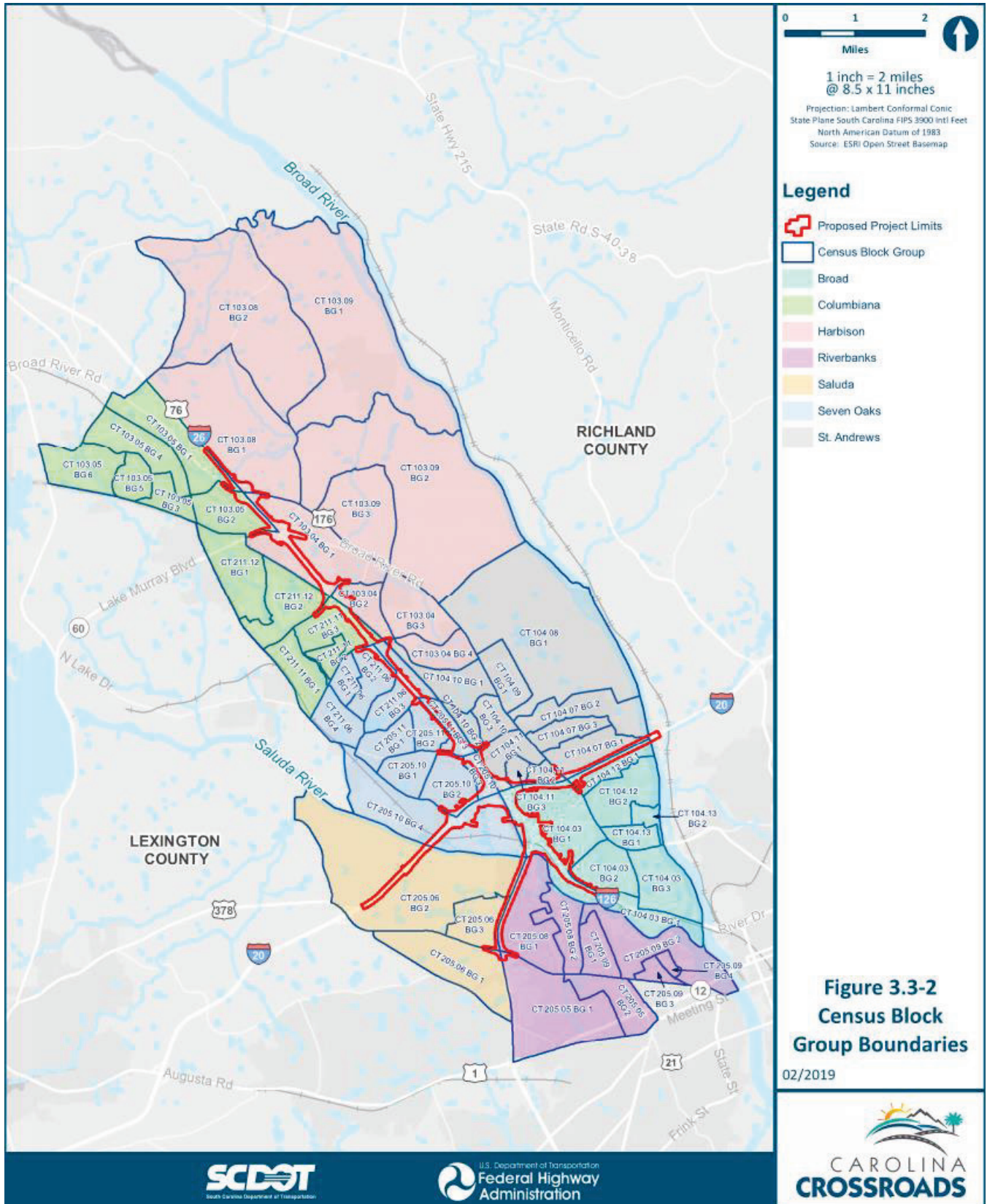
Table 3.3-3 shows the socioeconomic trends of the state, counties, CSA and communities, and each community is described in more detail in the sections following these tables.

Table 3.3-3 Study Area Socioeconomic Trends

	2010 Population	2040 Population	% Change	2010 Households	2040 Households	% Change	2010 Employment	2040 Employment	% Change
Lexington County	262,400	384,400	46.5%	102,700	148,600	44.7%	117,600	182,100	54.8%
Columbiana	12,200	12,000	-1.6%	4,800	4,600	-4.2%	10,900	14,300	31.2%
Seven Oaks	10,900	9,400	-13.8%	4,700	4,000	-14.9%	9,500	12,400	30.5%
Saluda	3,600	4,100	13.9%	1,600	1,800	12.5%	8,400	10,700	27.4%
Riverbanks	9,800	8,300	-15.3%	4,200	3,600	-14.3%	5,400	6,800	25.9%
Richland County	384,500	464,600	20.8%	145,200	178,900	23.2%	240,500	294,200	22.3%
Harbison	21,900	29,400	34.2%	8,900	11,500	29.2%	5,600	8,000	42.9%
St. Andrews	19,000	18,200	-4.2%	6,000	5,700	-5.0%	7,200	7,400	2.8%
Broad	9,000	9,500	5.6%	4,900	5,100	4.1%	17,400	24,200	39.1%
Study Area	86,500	90,900	5.1%	35,000	36,400	4.0%	64,400	83,900	30.3%
South Carolina	4,625,300	6,087,600	31.6%	1,801,100	2,401,400	33.3%	2,061,800	2,804,800	36.0%

Source: Socioeconomic data prepared for the South Carolina Statewide Travel Demand Model (2014/2015)

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3.3.4.2 Communities

Columbiana

The Columbiana community is located in Richland County and the Irmo sub-area of Lexington County, and situated west of I-26 and north of Piney Grove Road. The majority of the community is residential, with approximately 13 subdivisions in the community. Table 3.3-4 (and all subdivision tables to follow in this report) provides a general description of the subdivision. Table 3.3-4 also includes a reference to the census tract that encompasses all or the majority of the subdivision.

Table 3.3-4 Columbiana Subdivisions

Subdivision	Census tract	Description
Archers Court	211.12	Suburban single-family detached homes near Columbia Avenue
Bellmont	211.12	Suburban single-family detached homes near Columbia Avenue
Carmel Commons	211.12	Suburban single-family detached homes near Columbia Avenue
Challedon	211.11	Suburban single-family detached homes near Piney Grove Road
Cornerstone	103.05	Suburban single-family detached homes near Piney Grove Road
Country Towns	211.12	Townhomes near St. Andrews Road
Country Walk Apts	211.11	Apartment complex near the I-26 interchange at Piney Grove Road
Fox Run	103.05	Suburban single-family detached homes near Lake Murray Boulevard
Friarsgate	103.05	Suburban single-family detached homes near N. Woodrow Street
Palmetto Park	211.12	Suburban single-family detached homes near St. Andrews Road
Quail Valley	211.12	Suburban single-family detached homes near Crossbow Drive
Waterford	103.05	Suburban single-family detached homes near Dreher Shoals Road
Whitehall	211.06	Suburban single-family detached homes near Piney Grove Road

Source: U.S. Census Bureau; field review and aerial photography (including Google Maps); Lexington and Richland GIS

Community Economic Profile

The percent unemployed for Columbiana is 1.6 percent, compared to Lexington County, which contains 6.2 percent unemployed (see Table 3.3-2). The median household income for this community ranges from \$46,700 to \$71,000; two of the three census tracts in the community have higher medians than that of Lexington County (\$54,100). Employment projections for 2040 show a 31.2 percent increase from 2010, the greatest increase of all the communities studied in Lexington County. The median value of owner-occupied homes in Columbiana ranges from \$123,600 to \$191,000. In comparison, Lexington County has a median home value of \$140,100.

Community Socioeconomic Trends

Population

As listed in Table 3.3-3, the 2010 total population within the Columbiana community was 12,200, the highest population of all communities within the Lexington County portion of the CSA. Population growth within the CSA is expected to see a 5.1 percent increase between 2010 and 2040, while the total population in Columbiana is

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expected to decrease by 1.6 percent to twelve thousand by 2040. As a whole, the county is estimated to see a 46.5 percent increase in population by 2040.

Households

As listed in Table 3.3-3, there were 4,800 total households in Columbiana in 2010, which is the greatest concentration of households of all communities in the Lexington County portion of the CSA. The total number of households in Columbiana is expected to decrease 4.2 percent by 2040. Household growth of 4 percent is expected within the CSA, while Lexington County is predicted to see a 44.7 percent increase in households by 2040.

Employment

As listed in Table 3.3-3, in 2010, the total number of jobs in Columbiana was 10,900, the greatest number of jobs of all communities within the Lexington County portion of the CSA. The total number of jobs in 2040 in this community is expected to be 14,300, which would amount to a 31.2 percent increase. The Lexington County community with the highest concentration of jobs in 2040 is expected to be Columbiana, although job growth is anticipated throughout all communities. The CSA is expected to see a 30.3 percent increase in jobs, while Lexington County is predicted to see a 54.8 percent increase in number of jobs.

Seven Oaks

The Seven Oaks community is located in the Irmo sub-area of Lexington County, positioned west of I-26 and south of Piney Grove Road. Like the Columbiana community, the majority of the Seven Oaks community is residential, with approximately seventeen subdivisions in the community (see Table 3.3-5). There are some office uses along I-20, and institutional uses are concentrated along St. Andrews Road and Bush River Road. Commercial uses, such as restaurants and retail stores, are concentrated near the I-26/St. Andrews Road and I-26/Bush River Road interchanges, while industrial uses are concentrated along the Saluda River. Subdivisions and community resources can be seen in Table 3.3-5.

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Table 3.3-5 Seven Oaks Subdivisions

Subdivision	Census tract	Description
Churchill	205.11	Apartment Complex near St. Andrews Road
Closters	205.10	Apartment Complex near St. Andrews Road
Gardendale	205.10	Suburban single-family detached homes near St. Andrews Road
Grenadier	205.10	Suburban single-family detached homes near St. Andrews Road
Grove Park/Forest Grove	211.06	Suburban single-family detached homes near Piney Grove Road
Landmark	205.11	Suburban single-family detached homes near Sidney Road
Peach Tree Apts	205.11	Apartment Complex near I-26
Pine Glen	205.11	Suburban single-family detached homes near Bush River Road
Sherwood Forest	205.11	Suburban single-family detached homes near Bush River Road
St. Andrews Apts	205.11	Apartment Complex near I-26 and St. Andrews Road
Stoney Creek Apts	205.11	Apartment Complex near I-26
Stratton	205.11	Suburban single-family detached homes near Sidney Road
Whitcott	211.06	Apartment Complex near I-26
Whitehall	205.11/211.06	Suburban single-family detached homes near St. Andrews Road and I-26
Williamsburg West	205.11	Suburban single-family detached homes near I-26
Willow Winds	205.11	Suburban single-family detached homes near St. Andrews Road
Woodland Hills	205.11	Suburban single-family detached homes near Bush River Road

Source: U.S. Census Bureau; field review and aerial photography (including Google Maps); Lexington and Richland GIS

Community Economic Profile

The percent unemployed for Seven Oaks is 1.5 percent, compared to Lexington County, which contains 6.2 percent unemployed (see Table 3.3-2). The median household income for this community ranges from \$40,900 to \$79,600; only one census tract in the community has a higher median income than that of Lexington County (\$54,100), but that tract has the highest median income of all tracts in the CSA. Employment projections for 2040 show a 30.5 percent increase from 2010, compared to the overall county-wide employment growth of 54.8 percent from 2010 to 2040. The median value of owner-occupied homes in Seven Oaks ranges from \$134,100 to 166,900. In comparison, Lexington County has a median home value of \$140,100.

Community Socioeconomic Trends

Population

Seven Oaks contains the second highest population within the Lexington County portion of the CSA, with a 2010 total population of 10,900 (Table 3.3-3). The total population in Seven Oaks is expected to decrease by 13.8 percent to 9,400 by 2040. Population growth within the CSA is expected to see a 5.1 percent increase between 2010 and 2040, while as a whole, the County is estimated to see a 46.5 percent increase by 2040.

Households

As listed in Table 3.3-3, there were 4,700 total households in Seven Oaks in 2010. The total number of households in this community is expected to decrease 14.9 percent by 2040. Household growth of 4 percent is

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expected within the CSA, while Lexington County is predicted to see a 44.7 percent increase in households by 2040.

Employment

In 2010, the total number of jobs in Seven Oaks was 9,500 (Table 3.3-3), the second highest number of jobs in all communities within the Lexington County portion of the CSA. The total number of jobs in 2040 in this community is expected to be 12,400, a 30.5 percent increase. The communities with the highest concentration of jobs in 2040 are expected to be Columbiana and Broad, although job growth is anticipated throughout all communities. The CSA is expected to see a 30.3 percent increase in jobs, while overall, Lexington County is predicted to see a 54.8 percent increase in number of jobs.

Saluda

The Saluda community is located in the West Columbia sub-area of Lexington County, west of the Saluda River and I-26. Much of the area north of I-20 is undeveloped. The majority of the community south of I-20 is residential, with approximately eighteen subdivisions in the community (see Table 3.3-6). There are some office uses scattered throughout the community, and commercial uses are concentrated along US-378 or Sunset Boulevard. This community is anchored by the Lexington Medical Center at the interchange of I-26 and US-378. This over four hundred-bed complex is part of a network with six hundred physicians, sixty practices and six medical or urgent care centers (see Figure 3.3-5) (Lexington Medical Center 2015).

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Table 3.3-6 Saluda Subdivisions

Subdivision	Census tract	Description
Abberly Village Apartments	205.06	Apartment complex near Hulon Lane
Country Air Mobile Home Park	205.06	Mobile Home Community near Oakwood Road
Easton Estates	205.06	Suburban single-family detached homes near Fairlane Drive
Huffman Heights	205.06	Suburban single-family detached homes near Sunset Boulevard
Hulon Greene	205.06	Retirement community near Hulon Lane
Lexington Commons	205.06	Suburban single-family detached homes near Hulon Lane
Pine Lake	205.06	Suburban single-family detached homes near Fairlane Drive
Quail Apartments	205.06	Apartment complex near Feather Run Trail
Quail Creek	205.06	Suburban duplex homes near Pine Lake Drive
Quail Gardens	205.06	Suburban single-family detached homes near Henbet Drive
Quail Hollow	205.06	Suburban single-family detached homes near Ephrata Drive
Quail Hollow Village	205.06	Suburban single-family detached homes near Quail Hollow Lane
Quail Ridge	205.06	Suburban single-family detached homes near Henbet Drive
Riverchase	205.06	Suburban single-family detached homes near Riverchase Way
Royal Oaks	205.06	Suburban single-family detached homes near Riverchase Way
Saluda Commons	205.06	Suburban duplex homes near US-378 (Sunset Boulevard)
Sunset	205.06	Apartment complex near US-378 (Sunset Boulevard)
The Gates at Quail Hollow	205.06	Suburban single-family detached homes near Holly Ridge Lane

Source: U.S. Census Bureau; field review and aerial photography (including Google Maps); Lexington and Richland GIS

Community Economic Profile

The percent unemployed for Saluda is 0.8 percent, substantially less than Lexington County, which contains 6.2 percent unemployed (see Table 3.3-2). The median household income for this community is \$46,900, which is lower than that of Lexington County (\$54,100). Employment projections for 2040 show a 27.4 percent increase from 2010, compared to the overall county-wide employment growth of 54.8 percent from 2010 to 2040. The median value of owner-occupied homes in Saluda is \$208,100, the highest value in all communities in the CSA. Saluda's median home value is higher than the Lexington County median of \$140,100.

Community Socioeconomic Trends

Population

As listed in Table 3.3-3, the 2010 total population within the Saluda community was 3,600. By 2040, the total population is expected to increase by 13.9 percent to 4,100, the highest growth rate in all communities in the Lexington County portion of the CSA. Population growth within the CSA is expected to see a 5.1 percent increase between 2010 and 2040, while Lexington County as a whole is estimated to see a 46.5 percent increase in population by 2040. Saluda is the only community in the Lexington County portion of the CSA which is expected to have population and household growth through 2040.

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Households

As listed in Table 3.3-3, there were 1,600 total households in Saluda in 2010, the lowest concentration of households of all communities in the Lexington County portion of the CSA. The total number of households in Saluda is expected to increase 12.5 percent by 2040, which would be the highest household growth rate in all communities in the Lexington County portion of the CSA. An average household growth of 4 percent is expected within the CSA, while Lexington County is predicted to see a 44.7 percent increase in households by 2040.

Employment

The total number of jobs in Saluda was 8,400 in 2010 (Table 3.3-3). The total number of jobs in 2040 is expected to increase by 27.4 percent to 10,700. The CSA is expected to see a 30.3 percent increase in jobs, while Lexington County is predicted to see a 54.8 percent increase in number of jobs.

Riverbanks

The Riverbanks community is located in the West Columbia sub-area of Lexington County, between I-26 and I-126. The majority of the community is residential, with approximately thirty-five subdivisions in the community (see Table 3.3-7). The majority of this community is located within the city limits of West Columbia. There are some office and institutional uses scattered throughout the community, and commercial uses are concentrated along US-378 (Sunset Boulevard) corridor and the I-26 corridor. The Riverbanks Zoo and Garden sits on a one hundred seventy-acre site along the Saluda River; the garden is located in the Riverbanks community, and the zoo is located across the river in the Broad community of Richland County. This facility is home to thousands of animals and a botanical garden.

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Table 3.3-7 Riverbanks Subdivisions

Subdivision	Census tract	Description
Bridgepointe	205.09	Condominiums on Sunset Boulevard
Brookland Mill	205.05	Suburban single-family detached homes near Hook Avenue
Burning Ridge	205.05	Suburban single-family detached homes near N Brown Road
Charleston Row	205.09	Suburban single-family detached homes on Ashley Court
Colonial Park	205.05	Suburban single-family detached homes near N Brown Street
Columbia Circle	205.05	Suburban single-family detached homes near Holland Street
Corley Terrace	205.05	Suburban single-family detached homes near Augusta Road
Double Branch Creek	205.08/205.09	Suburban single-family detached homes near Carrolton Street
Green Hill	205.05	Suburban single-family detached homes near Jarvis Klapman Boulevard
Greenwood Acres	205.05	Suburban single-family detached homes near Jarvis Klapman Boulevard
Gunter Circle	205.09	Suburban single-family detached homes near Duke Street
Happy Town	205.05	Mobile Home Community near Double Branch Road
Holland Circle	205.05	Suburban single-family detached homes near Holland Street
Kleckwood Heights	205.05	Suburban single-family detached homes near Morningside Drive
Lakeview Park	205.05	Suburban single-family detached homes near Batchelor Street
Lazy Creek Mobile Home Park	205.05	Mobile Home Community near Leaphart Road
Lexington Park	205.05	Suburban single-family detached homes near N 12 th Street
Lexington Terrace	205.05	Suburban single-family detached homes and duplexes near N 12 th Street
Mimosa Crescent	205.09	Suburban single-family detached homes near Sunset Boulevard
Reserve on the Saluda	205.09	Suburban single-family detached homes on Laurel Crest Drive
Riverbend	205.09	Apartment complex near Edgewater Lane
Riverbend Apartments	205.09	Apartment complex near N Lucas Street
Rivers Edge	205.08	Suburban single-family detached homes near McSwain Drive
Saluda Chase	205.08	Suburban single-family detached homes near Cardinal Drive
Saluda Gardens	205.09	Suburban single-family detached homes near Sunset Boulevard
Saluda Hills	205.08	Suburban single-family detached homes near Cofield Drive
Saluda Mills	205.09	Suburban single-family detached homes near Mohawk Drive
Saluda Park	205.05	Suburban single-family detached homes near Double Branch Road
Saluda River Estates	205.09	Suburban single-family detached homes near Comanche Trail
Saluda Terrace	205.08	Suburban single-family detached homes near Saluda River Road
Skyview Heights	205.05	Suburban single-family detached homes near Jarvis Klapman Road
Sunset Terrace	205.09	Suburban single-family detached homes near Duke Street
Union Heights	205.09	Suburban single-family detached homes near N Leaphart Street
Westover Acres	205.08	Suburban single-family detached homes near McSwain Drive
Westwood Hills	205.08	Suburban single-family detached homes near Timber Ridge Drive

Source: U.S. Census Bureau; field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences

Community Economic Profile

The percent unemployed for Riverbanks is 2.6 percent, less than the 6.2 percent in Lexington County. The median household income for this community ranges from \$26,500 to \$78,300; only one of the three census tracts in this community are higher than that of Lexington County (\$54,100). Employment projections for 2040 show a 25.9 percent increase from 2010, compared to the overall county-wide employment growth of 54.8 percent from 2010 to 2040. The median value of owner-occupied homes in Riverbanks ranges from \$81,100 to \$174,700. In comparison, the Lexington County median home value is \$140,100.

Community Socioeconomic Trends

Population

The 2010 total population within the Riverbanks community was 9,800 (Table 3.3-3). The total population is expected to decrease by 15.3 percent to 8,300 by 2040. Population growth within the CSA is expected to see a 5.1 percent increase between 2010 and 2040, while Lexington County as a whole is estimated to see a 46.5 percent increase by 2040.

Households

As listed in Table 3.3-3, there were 4,200 total households in Riverbanks in 2010. The total number of households in this community is expected to decrease 14.3 percent by 2040. An average household growth of 4 percent is expected within the CSA, while Lexington County is predicted to see a 44.7 percent increase in households by 2040.

Employment

In 2010, the total number of jobs in Riverbanks was 5,400 (Table 3.3-3), the lowest concentration of jobs in all communities within the Lexington County portion of the CSA. The total number of jobs in 2040 in this community is expected to be 6,800, a 25.9 percent increase. The CSA is expected to see a 30.3 percent increase in jobs, while in Lexington County, a 54.8 percent increase in number of jobs is predicted.

Harbison

The Harbison community is located in the Dutch Fork sub-area of Richland County, between I-26 and the Broad River. This community has the greatest amount of undeveloped land in the CSA. The majority of developed portions of the community are residential, with approximately forty-two subdivisions in the community (see Table 3.3-8). There are some office and industrial uses scattered throughout the community, while commercial uses are concentrated along US-176 or Broad River Road. This community is anchored by the Harbison Environmental Education Forest (formerly Harbison State Forest), which is situated on more than two thousand acres in the southern portion of the Harbison community. No hunting or fishing is allowed in the forest, but other recreational opportunities include hiking, biking, camping, picnicking, nature study and canoe access to the Broad River (by permit). These neighborhoods and the forest can be seen, along with other community resources, in Figure 3.3-7.

3. Existing Conditions and Environmental Consequences



Table 3.3-8 Harbison Subdivisions

Subdivision	Census tract	Description
Arbor Oaks	103.09	Suburban single-family duplex homes near Lykes Lane
Ascot	103.08	Suburban single-family detached homes near Hollingshed Road
Audubon Oaks	103.08	Suburban single-family detached homes near I-26
Autumn Woods	103.09	Suburban single-family detached homes near Peachtree Drive
Beacon Hill	103.04	Suburban single-family detached homes near Columbiana Drive
Belfair Oaks	103.08	Suburban single-family detached homes near Kennerly Road
Bonnie Forest	103.04	Suburban single-family detached homes near US-176 (Broad River Road)
Caedmon's Creek	103.08	Suburban single-family detached homes near I-26
Chestnut Hill	103.09	Suburban single-family detached homes near Lost Creek Drive
Columbiana Ridge Apts	103.04	Apartment complex near Columbiana Drive
Concord Place	103.08	Suburban single-family detached homes near Kennerly Road
Crestmont	103.04	Apartment complex near I-26
Dutch Village	103.09	Suburban single-family detached homes near Kennerly Road
Forest Hills	103.04	Apartment complex near Harbison Boulevard
Foxboro	103.09	Suburban single-family detached homes near Hollingshed Drive
Glenridge	103.09	Suburban single-family detached homes near Broad River Road
Hamilton Park	103.04	Suburban single-family detached homes near Columbia Avenue
Hampton	103.04	Duplex development near US-176 (Broad River Road)
Harbison	103.04/103.09	Suburban single-family detached homes near US-176 (Broad River Road)
Harbison Wellspring Apts	103.04	Suburban single-family detached homes w/apartments near Harbison Boulevard
Harborchase	103.04	Suburban single-family detached homes near I-26
Heatherstone	103.08	Suburban single-family detached homes near Kennerly Road
Heritage Village	103.04	Multi-family development near US-176 (Broad River Road)
Highland Creek	103.09	Suburban single-family detached homes near Lost Creek Drive
Hollingshed Creek	103.09	Suburban single-family detached homes near Kennerly Road
Ivy Green	103.08	Suburban single-family detached homes near Koon Road
Kingston Forest	103.09	Suburban single-family detached homes near Hollingshed Road
Lost Creek	103.09	Suburban single-family detached homes near Lost Creek Drive
Manor View Court	103.04	Multi-family development near Woodcross Drive
Moses Hall	103.09	Suburban single-family detached homes near Moses Hall Drive
Paces Brook Apts	103.04	Apartment complex off of Columbia Drive near US-76
Palmerston	103.08	Suburban single-family detached homes near Koon Road
Pine Knoll	103.04	Suburban single-family detached homes near Piney Grove Road
Raintree Acres	103.09	Suburban single-family detached homes near Hollingshed Road
Riverwalk	103.09	Suburban single-family detached homes near US-176 (Broad River Road)
Springhaven	103.04	Suburban single-family detached homes near Piney Grove Road
Summerset	103.09	Suburban single-family detached homes near Silver Fox Lane

3. Existing Conditions and Environmental Consequences

Subdivision	Census tract	Description
Timber Knoll	103.09	Apartment complex near Harbison Boulevard
Walden Heights	103.04	Apartment complex near Lake Murray Boulevard
Wellspring	103.04	Apartment Complex near Harbison Boulevard
Windstone	103.04	Multi-family development near Harbison Boulevard
Winrose Place	103.09	Suburban single-family detached homes near Lykes Lane

Source: U.S. Census Bureau; field review and aerial photography (including Google Maps); Lexington and Richland GIS

Community Economic Profile

The percent unemployed for Harbison is 1.5 percent, less than Richland County, which contains 7.0 percent unemployed. The median household income for this community ranges from \$43,400 to \$65,300, which is generally higher than that of Richland County (\$48,400). Employment projections for 2040 show a 42.9 percent increase from 2010, compared to the overall Richland County employment growth of 22.3 percent from 2010 to 2040. This community is expected to see the greatest employment growth in the CSA.

Of the total population, 16.5 percent is considered low-income, less than the Richland County average of 27.9 percent. The median value of owner-occupied homes in Harbison ranges from \$112,300 to \$180,000. In comparison, the median home value in Richland County is \$149,800.

Community Socioeconomic Trends

Population

As listed in Table 3.3-3, the 2010 total population within the Harbison community was 21,900, which constitutes the highest concentration of people in the CSA. The total population in Harbison is expected to increase by 34.2 percent to 29,400 by 2040, the highest growth rate in all communities in the CSA. Population growth within the CSA is expected to see a 5.1 percent increase between 2010 and 2040, while population growth in Richland County as a whole is estimated to increase by 20.8 percent by 2040.

Households

As listed in Table 3.3-3, there were 8,900 total households in Harbison in 2010, the highest concentration of households of all communities in the CSA. The total number of households in Harbison is expected to increase 29.2 percent by 2040, the highest household growth rate in all communities in the CSA. An average household growth of 4 percent is expected within the CSA, while Richland County is predicted to experience a 23.2 percent increase in households by 2040.

Employment

The total number of jobs in Harbison was 5,600 in 2010 (Table 3.3-3), the lowest concentration of jobs in the Richland County portion of the CSA. The total number of jobs in 2040 is expected to increase by 42.9 percent to eight thousand, the highest job growth rate of all communities in the CSA. The CSA is expected to see a 30.3 percent increase in jobs, while Richland County is predicted to see a 22.3 percent increase in number of jobs.

3. Existing Conditions and Environmental Consequences

St. Andrews

The St. Andrews community is located in the West Columbia sub-area of Richland County, west of the Saluda River and I-26 and just northeast of the I-20/26 interchange. Several correctional institutions encompass large tracts of land in this community. The Broad River Correctional Institution is a high-security facility for male inmates and serves as the state’s capital punishment facility. The neighboring Kirkland Correctional Institution is the site of the state’s maximum security and protective custody units. A juvenile correctional facility and other law enforcement organizations have facilities in the same area, between Broad River Road and the Broad River.

The remainder of the community is predominantly residential, with approximately forty-seven subdivisions in the community (see Table 3.3-9). This community has a large percentage of multi-family housing, particularly along the interstate corridors. Commercial uses are concentrated along Broad River Road. Subdivisions and community resources can be seen in Figure 3.3-8.

Table 3.3-9 St. Andrews Subdivisions

Subdivision	Census tract	Description
Apple Valley	104.07	Suburban single-family detached homes near US-176 (Broad River Road)
Autumn Ridge	104.10	Apartment complex near Kay Street
Beatty Downs	104.10	Suburban attached townhomes near Beatty Road
Bent Tree	104.11	Apartment complex near Zimalcrest Drive
Briargate	104.11	Apartment complex near Briargate Circle
Broad River Estates	104.07	Suburban single-family detached homes near I-26
Brookpine Apts	104.09	Apartment complex near US-176 (Broad River Road)
Carriage House Lampighter Village	104.11	Apartment complex near Zimalcrest Drive
Chartwell	104.11	Suburban single-family detached homes near St. Andrews Road
Cherokee Gardens	104.11	Suburban single-family detached homes near Seminole Road
Colony East	104.10	Apartment complex near Kay Street
Courtyard Apts	104.10	Apartment complex near I-26
Courtyard Condos	104.10	Apartment complex near I-26
Crestland Place	104.10	Suburban duplex attached homes near Huffstetler Drive
Cricket Hill	104.10	Apartment complex near Evelyn Drive
Crossroads	104.11	Apartment complex near Seminole Road
Cypress Run Apts	104.09	Apartment complex near US-176 (Broad River Road)
Emerald Valley	104.07	Suburban single-family detached homes near Marley Drive
Farmdale	104.10	Suburban single-family detached homes near Piney Woods Road
Green Oaks	104.09	Apartment complex near US-176 (Broad River Road)
Haviland	104.09	Suburban single-family detached homes near US-176 (Broad River Road)
Homewood Terrace	104.10	Suburban single-family detached homes near US-176 (Broad River Road)
Hunters Pond	104.07	Suburban single-family detached homes near US-176 (Broad River Road)
Hunters Ridge	104.11	Apartment complex near US-176 (Broad River Road) and St. Andrews Road

3. Existing Conditions and Environmental Consequences



Subdivision	Census tract	Description
Kingswood & Pine Valley	104.07	Suburban single-family detached homes near US-176
London Berry	104.07	Multi-family development near US-176 (Broad River Road)
Mandel Park	104.10	Suburban single-family detached homes near US-176 (Broad River Road)
Marley	104.07	Suburban single-family detached homes near Marley Drive
Raintree	104.10	Apartment complex near Evelyn Dr and US-176 (Broad River Road)
Regency Park	104.09	Apartment complex near US-176 (Broad River Road)
Rembert Martin Park	104.10	Mobile home community near Beatty Road
Richland Terrace	104.10	Suburban townhome apartments near Metze Road
St. Andrews	104.07	Suburban single-family detached homes near US-176 (Broad River Road)
St. Andrews Place	104.07	Suburban single-family detached homes near US-176 (Broad River Road)
St. Andrews Terrace	104.09	Suburban single-family detached homes near US-176 (Broad River Road)
St. Andrews Apts	104.07	Apartment complex near I-26
St. Andrews Commons	104.11	Apartment complex near St. Andrews Road
St. Andrews Point	104.07	Apartment complex near St. Andrews Road
St. Andrews Woods	104.10	Suburban attached townhomes near Beatty Road
Suburban Acres	104.11	Suburban single-family detached homes near Beatty Road
The Farrington	104.07	Apartment complex near US-176 (Broad River Road)
The Quarters Condos	104.10	Apartment complex near US-176 (Broad River Road)
Village Creek	104.10	Apartment complex near Kay Street
Westchester	104.07	Suburban single-family detached homes near US-176 (Broad River Road)
Westshire	104.10	Suburban single-family detached homes near Beatty Road
Willow Creek	104.10	Apartment complex near Fernandina Road
Windridge Duplexes	104.10	Multi-family development (duplexes) near St. Andrews Road

Source: U.S. Census Bureau; field review and aerial photography (including Google Maps); Lexington and Richland GIS

Community Economic Profile

The percent unemployed for St. Andrews is 3.4 percent. The median household income for this community ranges from \$19,700 to \$41,000, with the lowest median household incomes in the CSA and lower than that of Richland County (\$48,400). Employment projections for 2040 show a 2.8 percent increase from 2010, much lower than the expected overall Richland County employment growth of 22.3 percent from 2010 to 2040.

Of the total population, 46.9 percent is considered low-income, which is higher than the Richland County average of 27.9 percent and the highest poverty rate in the CSA. The median value of owner-occupied homes in St. Andrews ranges from \$79,000 to \$106,800, with some of the lowest media home values in the CSA. In comparison, the median home value in Richland County is \$149,800.

3. Existing Conditions and Environmental Consequences

Community Socioeconomic Trends

Population

The 2010 total population within the St. Andrews community was nineteen thousand (Table 3.3-3), the second highest concentration of people in all communities of the CSA. The total population in St. Andrews is expected to decrease 4.2 percent to 18,200 by 2040. Population growth within the CSA is expected to see a 5.1 percent increase between 2010 and 2040, while the county as a whole is estimated to see a 20.8 percent increase by 2040.

Households

As listed in Table 3.3-3, there were six thousand total households in St. Andrews in 2010. The total number of households in this community is expected to decrease 5 percent by 2040. An average household growth of 4 percent is expected within the CSA, while Richland County is predicted to see a 23.2 percent increase in households by 2040.

Employment

The total number of jobs in St. Andrews was 7,200 in 2010 (Table 3.3-3). The total number of jobs in 2040 in this community is expected to be 7,400, a 2.8 percent increase. The CSA is expected to see a 30.3 percent increase in jobs, while Richland County is predicted to see a 22.3 percent increase in number of jobs.

Broad

The Broad community is located in the West Columbia sub-area of Richland County, situated between I-20 and I-126. The majority of the community is residential, with approximately twenty-nine subdivisions in the community (see Table 3.3-10). There are some office and industrial uses scattered throughout the community, and commercial uses are concentrated along Bush River Road and Greystone Boulevard. This community is anchored by the Dutch Square Center, a large mall situated on Bush River Road, the first enclosed mall built in the state of South Carolina. There are several auto dealerships located along Greystone Boulevard. Additionally, the Riverbanks Zoo and Garden is located in the very southern portion of the Broad community along the Saluda River.

3. Existing Conditions and Environmental Consequences

Table 3.3-10 Broad Subdivisions

Subdivision	Census tract	Description
Arrowwood	104.03	Suburban single-family detached homes near Arrowwood Drive
Arrowwood Heights	104.03	Suburban single-family detached homes near Arrowwood Road
Ashton at Longcreek	104.12	Apartment complex near Longcreek Drive
Belmont Estates	104.03	Suburban single-family detached homes near Bakersfield Road
Broad River Township	104.13	Gated community containing patio homes, river homes, and condos near Bentley Road
Broad River Trace Apartment	104.03	Apartment complex near Riverhill Circle
Carnaby Square	104.12	Condominium complex near Longcreek Drive
Dutchbrook	104.03	Suburban single-family detached homes near N Arrowwood Road
Elm Abode	104.12	Suburban single-family detached homes near Broad River Road
Essex Park Apartments	104.12	Apartment complex near Longcreek Drive
Greenbrook	104.03	Suburban single-family detached homes near Arrowwood Road
Huffman Heights	104.13	Suburban single-family detached homes near Broad River Road
Huffman Heights	104.03	Suburban single-family detached homes near Arrowwood Road
Lexington Green	104.03	Condominium community near Bush River Road
Pinewood Knoll	104.03	Suburban single-family detached homes near Starlight Drive
Rivergate Apartments	104.13	Apartment complex near Bentley Road
Riverside Park	104.12	Suburban single-family detached homes near Broad River Road
Riverview Apartments	104.12/104.13	Apartment complex near Bentley Drive
Riverwind Apartments	104.12	Apartment complex near Longcreek Drive
Skyland Estates	104.03	Suburban single-family detached homes near Riverhill Circle
Skyview Terrace	104.03	Suburban single-family detached homes near Browning Road
Stone Ridge Apartments	104.03	Apartment complex near Skyland Drive
The Bentley at Broad River	104.13	Apartment complex near Bentley Drive
The Hollows	104.12	Apartment complex near Longcreek Drive
The Mill at Broad River Trace Apartments	104.13	Apartment complex near Broad River Road
The Park Apartments	104.12	Apartment complex near Longcreek Drive
The Waterford Apartments	104.12	Apartment complex near Longcreek Drive
Three Rivers	104.03	Apartment complex near Gracern Road
Wynfield Gables	104.12	Suburban single-family detached homes near Broad River Road

Source: U.S. Census Bureau; field review and aerial photography (including Google Maps); Lexington and Richland GIS

Community Economic Profile

The percent unemployed for Broad is 3.1 percent, less than Richland County, which contains 7.0 percent unemployed. The median household income for this community ranges from \$29,800 to \$44,500, which is lower

3. Existing Conditions and Environmental Consequences

than that of Richland County (\$48,400). Employment projections for 2040 show a 39.1 percent increase from 2010, higher than the overall Richland County employment growth of 22.3 percent from 2010 to 2040.

Of the total population, 40.5 percent is considered low-income, which is higher than the Richland County average of 27.9 percent. The median value of owner-occupied homes in Broad ranges from \$106,600 to \$126,300. Broad's median home values are lower than the Richland County median of \$149,800.

Community Socioeconomic Trends

Population

The 2010 total population within the Broad community was nine thousand (Table 3.3-3), the lowest concentration of people in all communities of the Richland County portion of the CSA. The total population in Broad is expected to increase by 5.6 percent to 9,500 by 2040. Population growth within the CSA is also expected to see a 5.1 percent increase between 2010 and 2040, while Richland County as a whole is estimated to see a 20.8 percent increase by 2040.

Households

As listed in Table 3.3-3, there were 4,900 total households in Broad in 2010, the lowest concentration of households in all communities of the Richland County portion of the CSA. The total number of households in this community is expected to experience an increase of 4.1 percent by 2040. An average household growth of 4 percent is expected within the CSA, while Richland County is predicted to see a 23.2 percent increase in households by 2040.

Employment

The total number of jobs in Broad was 17,400 in 2010 (Table 3.3-3), the highest concentration of jobs in all communities of the CSA. The total number of jobs in 2040 in this community is expected to be 24,200; this would constitute a 39.1 percent increase and would represent the highest concentration of jobs in the CSA in 2040. Job growth is anticipated throughout all communities. The CSA is expected to see a 30.3 percent increase in jobs, while Richland County is predicted to see a 22.3 percent increase in number of jobs.

3.3.4.3 Business Community Profile

Land use within the project study area is predominately residential (43.1 percent). However, around the interchange locations, land uses are predominately commercial, including retail commercial, large big-box retail commercial, small-scale strip malls, restaurants, hotel/motels, automotive services, offices, medical facilities, and restaurants. Land uses generally transition to residential or undeveloped, with pockets of office/commercial uses outside of the direct interchange locations.

Columbiana

While the majority of the Columbiana community is residential, there are office uses along Lake Murray Boulevard and St. Andrews Road and commercial uses along Lake Murray Boulevard and Harbison Boulevard. The large, regional commercial centers of Columbiana Centre and Columbiana Station are both located near the Harbison Boulevard interchange at I-26.

3. Existing Conditions and Environmental Consequences

Seven Oaks

Like the Columbiana community, the majority of the Seven Oaks community is residential. There are some office uses along I-20, and institutional uses are concentrated along St. Andrews Road and Bush River Road. Commercial uses, such as restaurants and retail stores, are concentrated near the I-26/St. Andrews Road interchange, while industrial uses are concentrated along the Saluda River.

Saluda

The majority of the community south of I-20 is residential. There are some office uses scattered throughout the community, and commercial uses are concentrated along Sunset Boulevard. The community is anchored by the Lexington Medical Center at the interchange of I-26 and US-378 (Sunset Boulevard).

Riverbanks

The majority of this community is located within the city limits of West Columbia and is residential in nature. There are some office and institutional uses scattered throughout the community, and commercial uses are concentrated along the Sunset Boulevard and I-26 corridors. The Riverbanks Zoo and Botanical Garden sits on a large site along the Saluda River; the garden is located in the Riverbanks community, and the zoo is located across the river in the Broad community of Richland County.

Harbison

There are some office and industrial uses scattered throughout the community, while commercial uses are concentrated along US-176 or Broad River Road.

St. Andrews

Several correctional institutions encompass large tracts of land in this community. The remainder of the community is predominantly residential. Commercial uses are concentrated along Broad River Road.

Broad

The majority of the community is residential. There are some office and industrial uses scattered throughout the community, and commercial uses are concentrated along Bush River Road and Greystone Boulevard. The community is anchored by the Dutch Square Center, a large mall on Bush River Road. The Riverbanks Zoo is located in the southern portion of the community.

3.3.4.4 Community Facilities and Services

Community facilities include, but are not limited to, public (or publicly funded) schools; libraries; parks and recreational facilities; health care facilities; fire, police, and emergency services; and public utilities. A proposed project could affect facility services if it were to physically displace or alter the facility, or change the way services are delivered to community. There are numerous community facilities located through the proposed project corridor.

3. Existing Conditions and Environmental Consequences

Columbiana

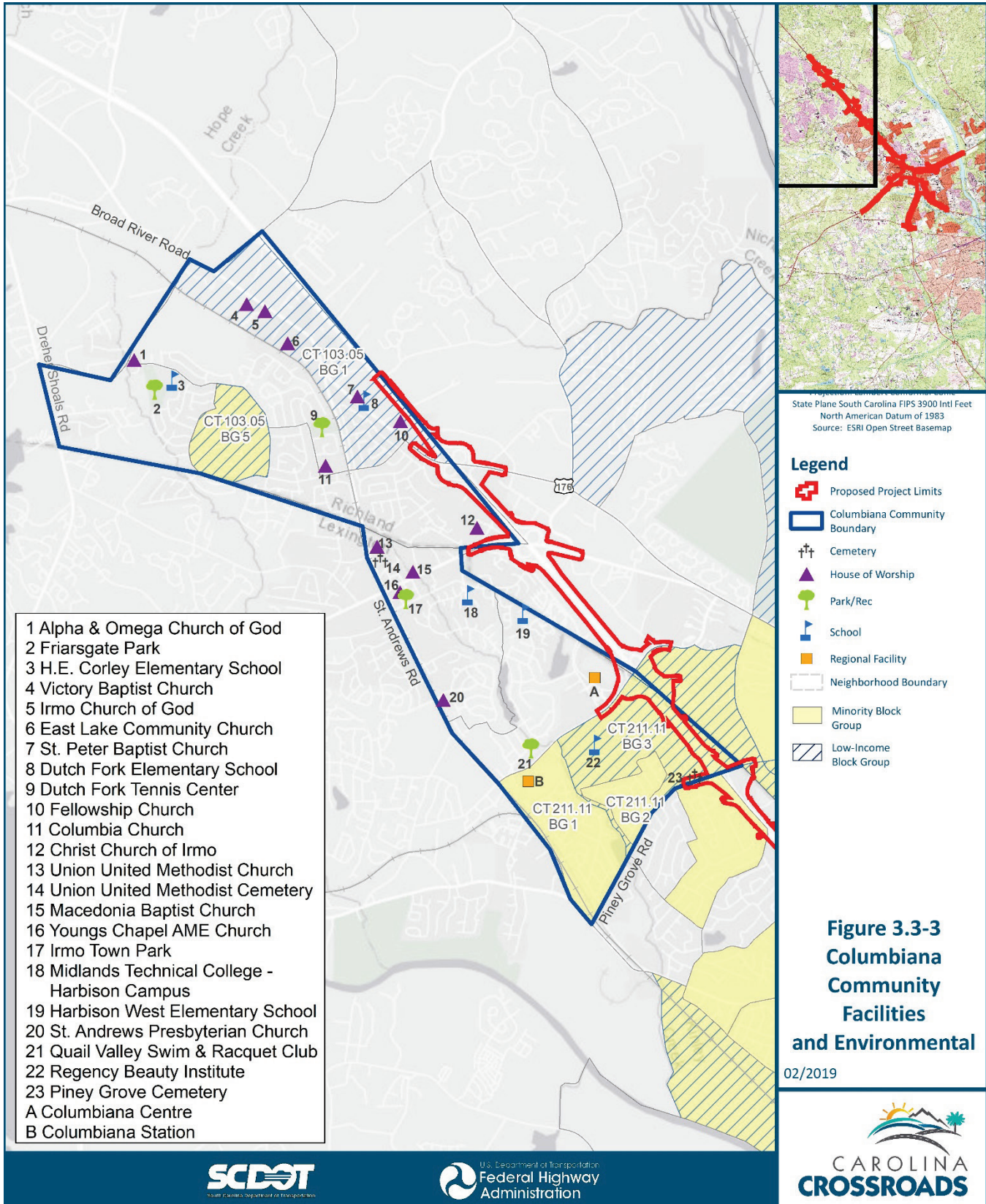
Town of Irmo services (police, fire, town hall) are located between Lake Murray Boulevard and Harbison Boulevard. The Midlands Technical College–Harbison Campus is located nearby on nineteen acres; it was originally the site of Harbison Junior College. The campus offers courses and workshops to enhance professional development. Churches and cemeteries are scattered throughout the community and are identified along with parks and recreation facilities and schools in Table 3.3-11. These resources are labeled with a corresponding map ID on Figure 3.3-3. In addition, various utilities are located throughout the Columbiana community including SCE&G (electrical, natural gas) distribution lines, communications lines; and water and sewer lines.

Table 3.3-11 Columbiana Resources

Resource	Name	Location	Map ID
Churches & Cemeteries	Alpha & Omega Church of God	1713 Chadford Road	1
	Victory Baptist Church	10245 Broad River Road	4
	Irmo Church of God	10215 Broad River Road	5
	East Lake Community Church	10057 Broad River Road	6
	St. Peter Baptist Church	7910 Broad River Road	7
	Fellowship Church	Roof Lowman Road	10
	Columbia Church	220 N Royal Tower Drive	11
	Christ Church of Irmo	25 Bluebird Trail	12
	Union United Methodist Church	7582 Woodrow Street	13
	Union United Methodist Cemetery	7582 Woodrow Street	14
	Macedonia Baptist Church	1125 Lake Murray Boulevard	15
	Youngs Chapel AME Church	7336 Carlisle Street	16
	St. Andrews Presbyterian Church	6952 St Andrews Road	20
	Piney Grove Cemetery	439 Piney Grove Road	23
	Parks & Recreation	Friarsgate Park	1712 Chadford Road
Dutch Fork Tennis Center		1141 Friarsgate Boulevard	9
Irmo Town Park		1249 Lexington Avenue	17
Quail Valley Swim & Racquet Club		1330 Country Squire Drive	21
Schools	H.E. Corley Elementary School	1500 Chadford Road	3
	Dutch Fork Elementary School	7900 Broad River Road	8
	Midlands Technical College - Harbison Campus	7300 College Street	18
	Harbison West Elementary School	257 Crossbow Drive	19
	Regency Beauty Institute	260 Harbison Boulevard #20	22

Source: local plans, field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences



3. Existing Conditions and Environmental Consequences

Seven Oaks

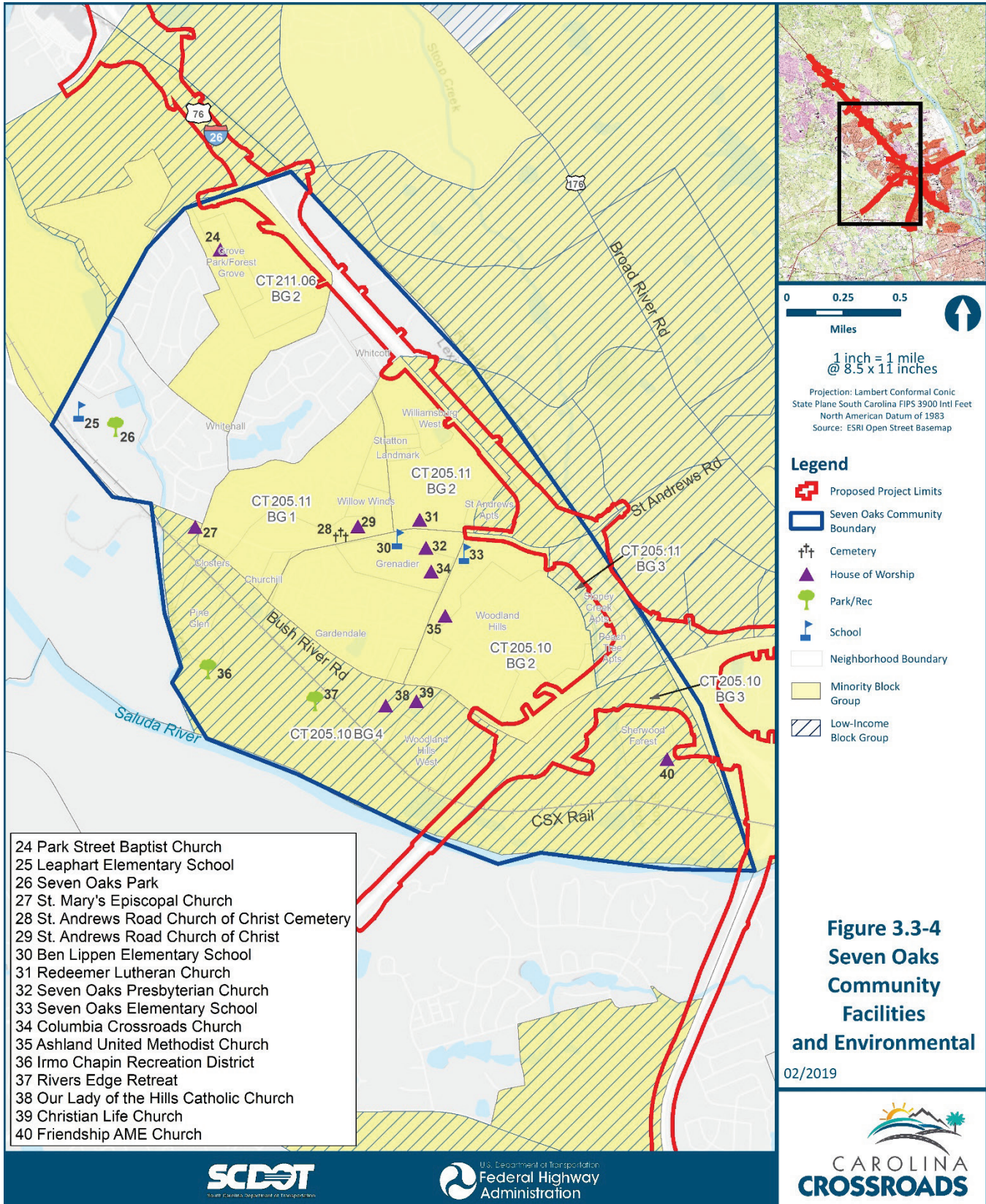
The Seven Oaks community is anchored by the large Whitehall subdivision and several parks on the western edge of the community. Churches and cemeteries are scattered throughout the community and are identified along with parks and recreation facilities and schools in Table 3.3-12. These resources are labeled with a corresponding map ID on Figure 3.3-4. Various utilities are located throughout the Seven Oaks community including SCE&G (electrical, natural gas) distribution lines, including a high-pressure line; communications lines, including a high-capacity duct bank; electrical transmission lines; and water and sewer lines.

Table 3.3-12 Seven Oaks Resources

Resource	Name	Location	Map ID
Churches & Cemeteries	Park Street Baptist Church	2204 Park Street	24
	St. Mary's Episcopal Church	170 St Andrews Road	27
	St. Andrews Road Church of Christ Cemetery	425 St Andrews Road	28
	St. Andrews Road Church of Christ	425 St Andrews Road	29
	Redeemer Lutheran Church	525 St Andrews Road	31
	Seven Oaks Presbyterian Church	530 St Andrews Road	32
	Columbia Crossroads Church	2723 Ashland Road	34
	Ashland United Methodist Church	2600 Ashland Road	35
	Our Lady of the Hills Catholic Church	120 Marydale Lane	38
	Christian Life Church	2700 Bush River Road	39
	Friendship AME Church	1449 Bush River Road	40
	Parks & Recreation	Irmo Chapin Recreation District	5605 Bush River Road
Rivers Edge Retreat		1019 Garden Valley Lane	37
Seven Oaks Park		200 Leisure Lane	26
Schools	Leaphart Elementary School	120 Piney Grove Road	25
	Ben Lippen Elementary School	7401 Monticello Road	30
	Seven Oaks Elementary School	2800 Ashland Road	33

Source: local plans, field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences



3. Existing Conditions and Environmental Consequences

Saluda

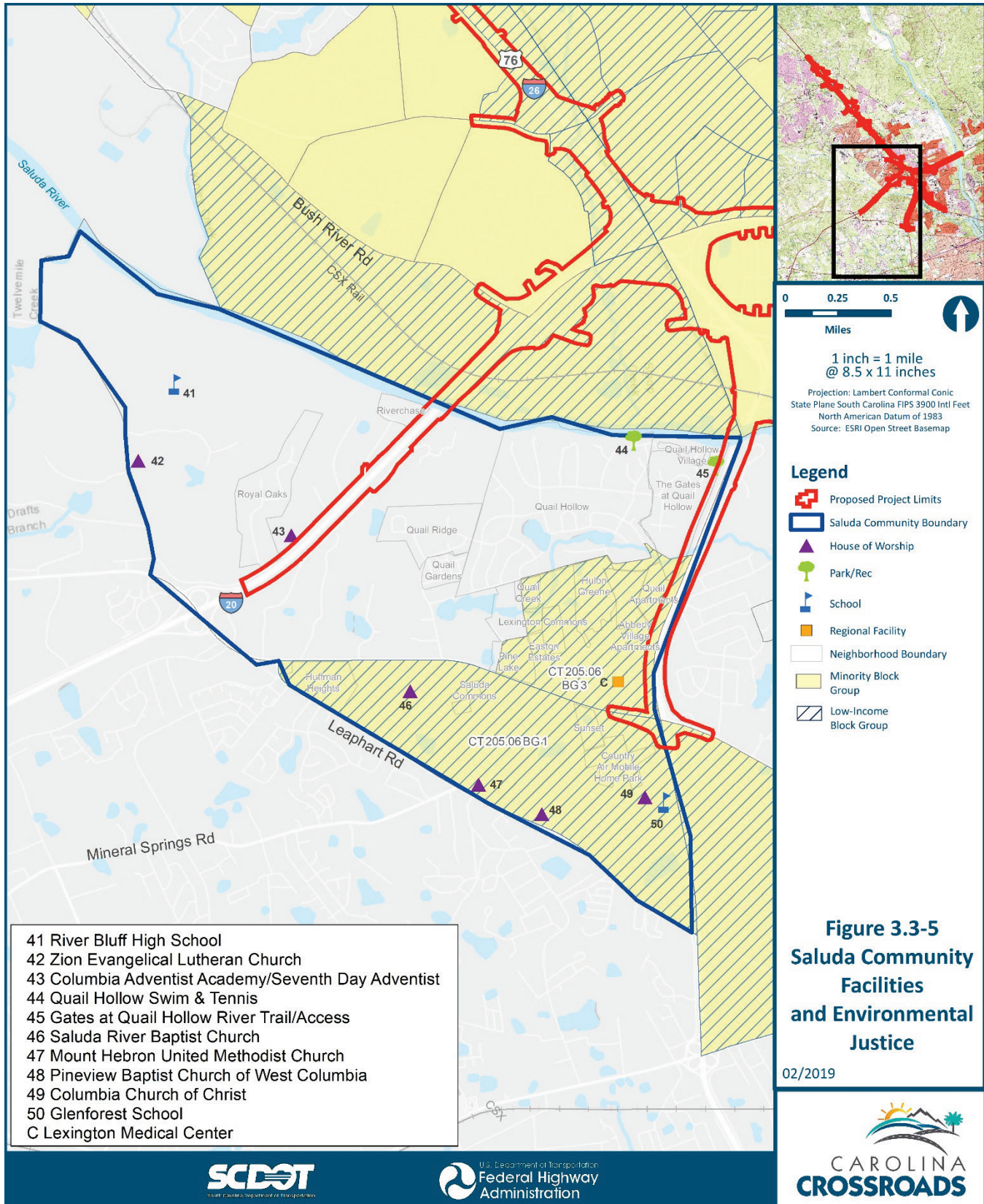
Churches and cemeteries are scattered throughout the Saluda community and are identified along with parks and recreation facilities and schools in Table 3.3-13. These resources are labeled with a corresponding map ID on Figure 3.3-5. Various utilities are located throughout the Saluda community including SCE&G (electrical, natural gas) distribution lines; communications lines; electrical transmission lines; and water and sewer lines.

Table 3.3-13 Saluda Resources

Resource	Name	Location	Map ID
Churches & Cemeteries	Zion Evangelical Lutheran Church	226 Corley Mill Road	42
	Columbia Adventist Academy/Seventh Day Adventist	241 Riverchase Way	43
	Saluda River Baptist Church	3459 Sunset Boulevard	46
	Mount Hebron United Methodist Church	3050 Leaphart Road	47
	Pineview Baptist Church of West Columbia	3010 Leaphart Road	48
	Columbia Church of Christ	1049 Harbor Drive	49
Parks & Recreation	Quail Hollow Swim & Tennis	131 Blackhawk Trail	44
	Gates at Quail Hollow River Trail/Access	19 Willow Oaks Lane	45
Schools	River Bluff High School	320 Corley Mill Road	41
	Glenforest School	1041 Harbor Drive	50

Source: local plans, field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences



3. Existing Conditions and Environmental Consequences

Riverbanks

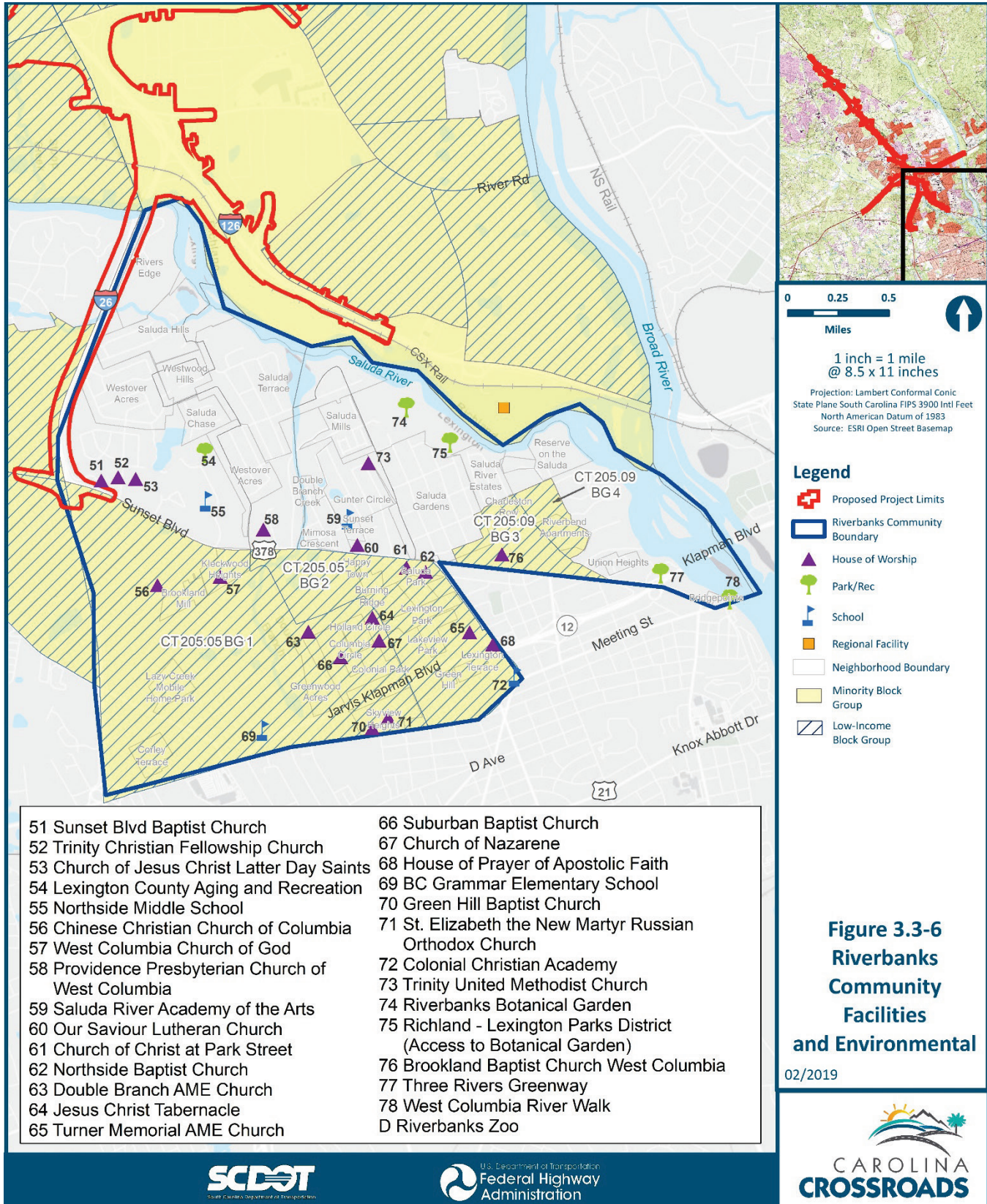
Churches and cemeteries are scattered throughout the Riverbanks community and are identified along with other facilities in Table 3.3-14. These resources are labeled with a corresponding map ID on Figure 3.3-6. Various utilities are located throughout the Riverbanks community including SCE&G (electrical, natural gas) distribution lines, including a high-pressure line; communications lines; and water and sewer lines.

Table 3.3-14 Riverbanks Resources

Resource	Name	Location	Map ID
Churches & Cemeteries	Sunset Blvd Baptist Church	3459 Sunset Boulevard	51
	Trinity Christian Fellowship Church	1985 Old Fountain Road	52
	Church of Jesus Christ Latter Day Saints	1330 Whippoorwill Drive	53
	Chinese Christian Church of Columbia	2367 Klapman Road	56
	West Columbia Church of God	915 Kim Street	57
	Providence Presbyterian Church of West Columbia	1112 Hummingbird Drive	58
	Our Saviour Lutheran Church	1500 Sunset Boulevard	60
	Church of Christ at Park Street	1303 Sunset Boulevard	61
	Northside Baptist Church	4347 Sunset Boulevard	62
	Double Branch AME Church	Double Branch Road	63
	Jesus Christ Tabernacle	635 N. Brown Street	64
	Turner Memorial AME Church	1122 Monticello Street	65
	Suburban Baptist Church	1700 Holland Street	66
	Church of Nazarene	100 S Woodside Parkway	67
	House for Prayer of Apostolic Faith	311 Lexington Street	68
	Green Hill Baptist Church	1734 Augusta Road	70
	St. Elizabeth the New Martyr Russian Orthodox Church	1703 Shull Street	71
	Trinity United Methodist Church	1201 Mohawk Drive	73
	Brookland Baptist Church West Columbia	1066 Sunset Boulevard	76
	Parks & Recreation	Lexington County Aging and Recreation	563 S Lake Drive
Riverbanks Botanical Garden		500 Wildlife Parkway	74
Richland - Lexington Parks District (Access to Botanical Garden)		1114 Ontario Drive	75
Three Rivers Greenway		3436 Keenan Drive	77
West Columbia River Walk		100 Sunset Boulevard	78
Schools	Northside Middle School	157 Cougar Drive	55
	Saluda River Academy of the Arts	1520 Duke Street	59
	BC Grammar Elementary School	114 Hook Avenue	69
	Colonial Christian Academy	1110 Meeting Street	72

Source: local plans, field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences



**Figure 3.3-6
Riverbanks
Community
Facilities
and Environmental**

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3. Existing Conditions and Environmental Consequences

Harbison

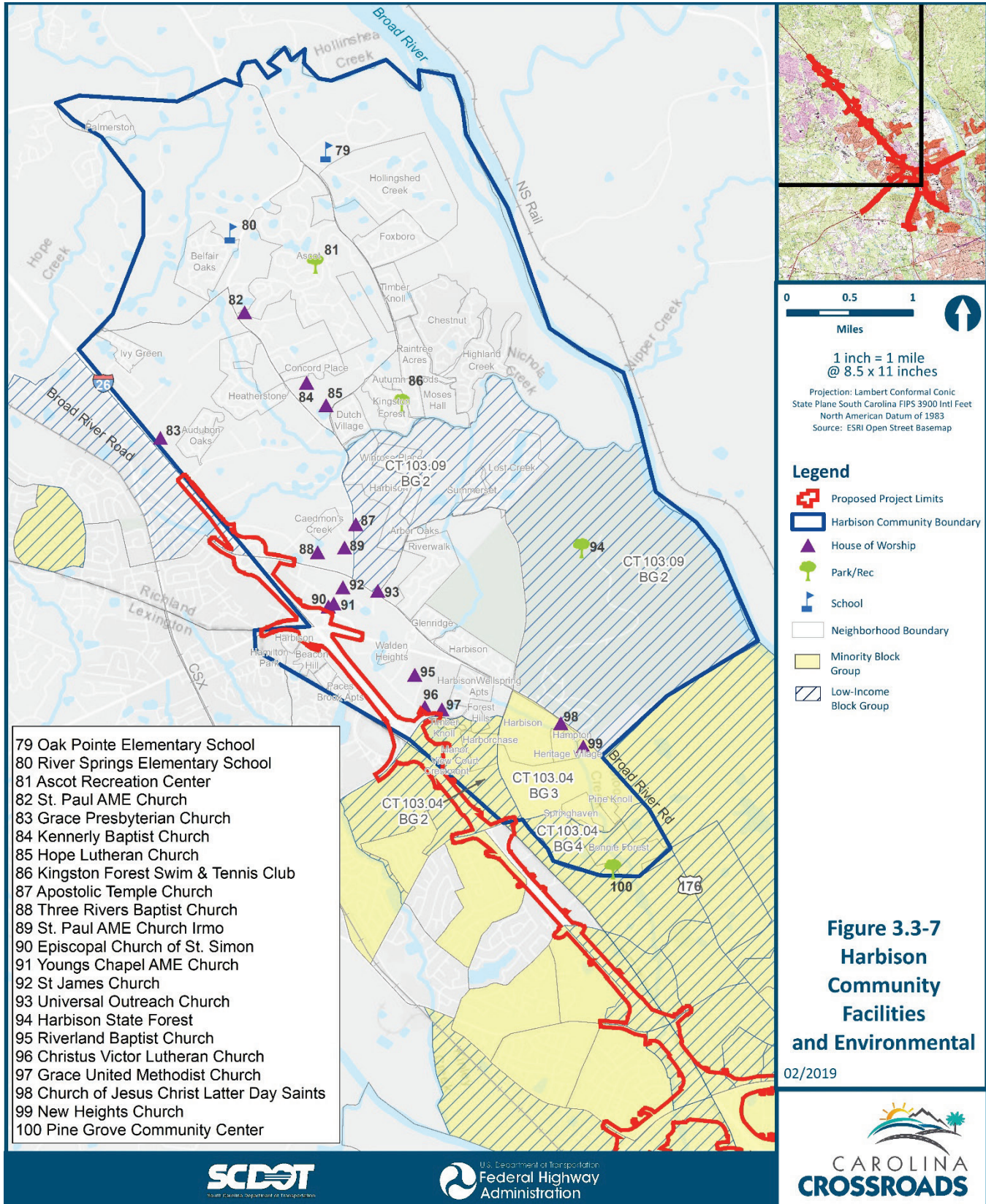
Churches are scattered throughout the Harbison community and are identified along with parks and recreation facilities and schools in Table 3.3-15. These resources are labeled with a corresponding map ID on Figure 3.3-7. Various utilities are located throughout the Harbison community including SCE&G (electrical, natural gas), which includes a significant Dominion gas line; distribution lines, including a high-pressure line; communications lines, including cellular towers; electrical transmission lines; and water and sewer lines.

Table 3.3-15 Harbison Resources

Resource	Name	Location	Map ID
Churches & Cemeteries	St. Paul AME Church	835 Kennerly Road	82
	Grace Presbyterian Church	225 N Brickyard Road	83
	Kennerly Baptist Church	1526 Kennerly Road	84
	Hope Lutheran Church	1400 Kennerly Road	85
	Apostolic Temple Church	928 Kennerly Road	87
	Three Rivers Baptist Church	7452 Broad River Road	88
	St. Paul AME Church Irmo	835 Kennedy Road	89
	Episcopal Church of St. Simon	1110 Kinley Road	90
	Youngs Chapel AME Church	7336 Carlisle Street	91
	St James Church	1016 Kinley Road	92
	Universal Outreach Church	7232 Broad River Road	93
	Riverland Baptist Church	201 Lake Murray Boulevard	95
	Christus Victor Lutheran Church	400 Harbison Boulevard	96
	Grace United Methodist Church	410 Harbison Boulevard	97
	Church of Jesus Christ Latter Day Saints	7449 Broad River Road	98
	New Heights Church	5501 Broad River Road	99
Parks & Recreation	Ascot Recreation Center	1026 Steeple Ridge Road	81
	Kingston Forest Swim & Tennis Club	200 Delanie Woods Drive	86
	Harbison State Forest	Broad River Road	94
	Pine Grove Community Center	937 Piney Woods Road	100
Schools	Oak Pointe Elementary School	1 Riverbottom Road	79
	River Springs Elementary School	115 State Road S-40-2396	80

Source: local plans, field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences



3. Existing Conditions and Environmental Consequences

St. Andrews

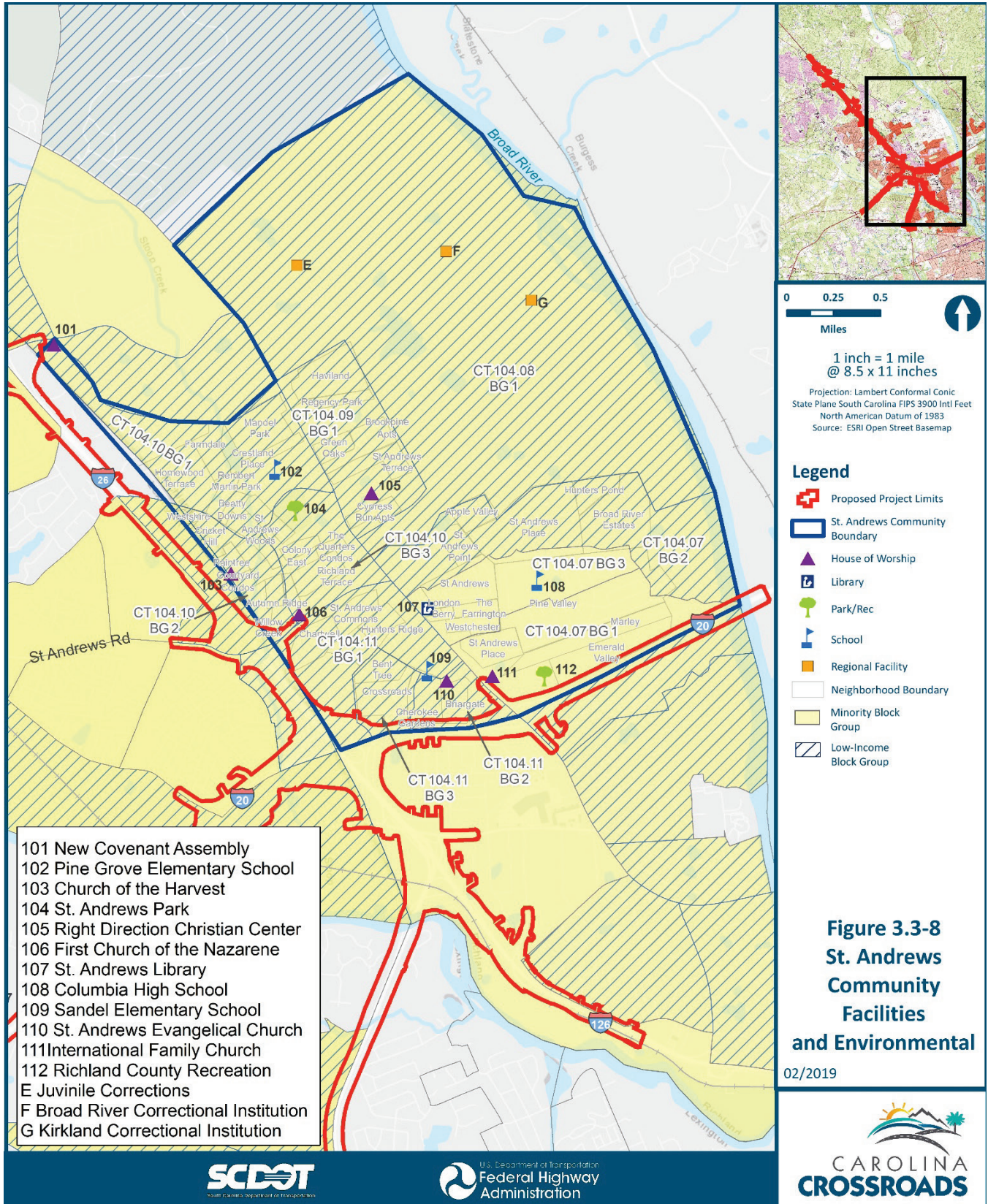
Churches are scattered throughout the St. Andrews community and are identified along with parks and recreation facilities and schools in Table 3.3-16. These resources are labeled with a corresponding map ID on Figure 3.3-8. Various utilities are located throughout the St. Andrews community including SCE&G (electrical, natural gas) distribution lines, including a high-pressure line; communications lines, including a high-capacity duct bank; and water and sewer lines.

Table 3.3-16 St. Andrews Resources

Resource	Name	Location	Map ID
Churches & Cemeteries	New Covenant Assembly	600 Piney Woods Road	101
	Church of the Harvest	4865 Sunset Boulevard	103
	Right Direction Christian Center	1234 St Andrews Road	105
	First Church of the Nazarene	901 St Andrews Road	106
	St. Andrews Evangelical Church	2609 Seminole Road	110
	International Family Church	1311 Marley Drive	111
Parks & Recreation	St. Andrews Park	920 Beatty Road	104
	St. Andrews Library	2916 Broad River Road	107
	Richland County Recreation	1320 Clemson Road	112
Schools	Pine Grove Elementary School	111 Huffstetler Drive	102
	Columbia High School	1701 Westchester Drive	108
	Sandel Elementary School	2700 Seminole Road	109

Source: local plans, field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences



3. Existing Conditions and Environmental Consequences

Broad

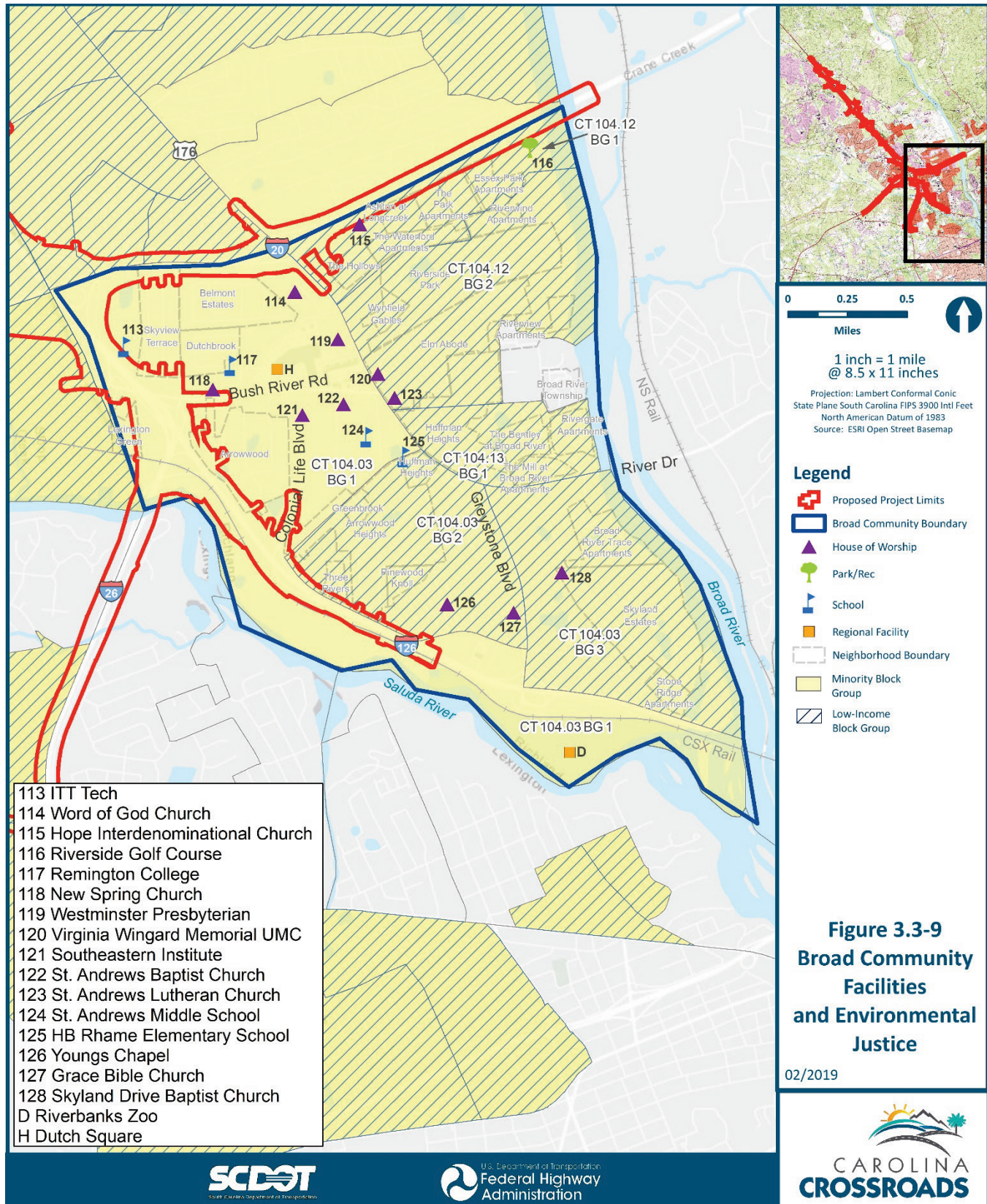
Churches are scattered throughout the Broad community and are identified along with parks and recreation facilities and schools in Table 3.3-17. These resources are labeled with a corresponding map ID on Figure 3.3-9. Various utilities are located throughout the Broad community including SCE&G (electrical, natural gas) distribution lines; communications lines; electrical transmission lines; and water and sewer lines, including a sewer pump station.

Table 3.3-17 Broad Resources

Resource	Name	Location	Map ID
Churches & Cemeteries	Word of God Church	131 Diamond Lane	114
	Hope Interdenominational Church	1341 Garner Lane # 200	115
	New Spring Church	657 Bush River Road	118
	Westminster Presbyterian	1715 Broad River Road	119
	Virginia Wingard Memorial UMC	1500 Broad River Road	120
	St. Andrews Baptist Church	230 Bush River Road	122
	St. Andrews Lutheran Church	1416 Broad River Road	123
	Youngs Chapel	359 Jacob Road	126
	Grace Bible Church	301 Greystone Boulevard #15	127
	Skyland Drive Baptist Church	901 Skyland Drive	128
Parks & Recreation	Riverside Golf Course	1600 Garner Lane	116
Schools	ITT Tech	1628 Browning Road #180	113
	Remington College	607 Bush River Road	117
	Southeastern Institute	1420 Colonial Life Boulevard W	121
	St. Andrews Middle School	1231 Bluefield Drive	124
	HB Rhame Elementary School	1300 Arrowwood Road	125

Source: local plans, field review and aerial photography (including Google Maps); Lexington and Richland GIS

3. Existing Conditions and Environmental Consequences



- 113 ITT Tech
- 114 Word of God Church
- 115 Hope Interdenominational Church
- 116 Riverside Golf Course
- 117 Remington College
- 118 New Spring Church
- 119 Westminster Presbyterian
- 120 Virginia Wingard Memorial UMC
- 121 Southeastern Institute
- 122 St. Andrews Baptist Church
- 123 St. Andrews Lutheran Church
- 124 St. Andrews Middle School
- 125 HB Rhame Elementary School
- 126 Youngs Chapel
- 127 Grace Bible Church
- 128 Skyland Drive Baptist Church
- D Riverbanks Zoo
- H Dutch Square

3. Existing Conditions and Environmental Consequences

3.3.4.5 Travel Patterns and Community Cohesion

There are numerous ways for people within the communities along the proposed project corridor to travel, including via automobile on the interstate, major arterials, local roads; bus; bicycles; and walking.

Roadway Network

In addition the I-20/26/126 corridor, the roadway network in the community study area includes four U.S. routes (US-76, US-176, US-378, and US-1), two state highways (SC-60 and SC-12), and many local roadways. I-20 runs west to east through the community study area, while I-26 and US-76 traverse the community study area as north-south routes. I-126 veers southeastward from I-26 and accesses downtown Columbia. Local and regional commuters use all of these roadways. US-176, also known as Broad River Road in the community study area, travels in a north-south route through the community study area toward downtown Columbia. It traverses the Columbiana community and serves as the backbone of the Harbison, St. Andrews, and Broad communities. US-378 traverses the community study area from west to east and passes through downtown Columbia. This highway is known as Sunset Boulevard and serves as the backbone of both the Saluda and Riverbanks communities. US-1 is located in the southernmost portion of the Riverbanks community and traverses the community study area as Meeting Street and Augusta Road (running west-east). SC-60, also known as Lake Murray Boulevard, connects Lake Murray to US-176. It is an important commercial and office corridor in the Columbiana community. SC-12, also known as Jarvis Klapman Boulevard, runs east-west through the Riverbanks community.

Public Transit

The Central Midlands Regional Transit Authority (CMRTA), also known as the Comet, provides bus service to the much of the community study area and other portions of the central Midlands region. There are three routes that service the CSA, including one through West Columbia, one along St. Andrews Road through the Irmo area, and another primarily along Bush River Road. Additionally, CMRTA/Comet operates a Dial-A-Ride Transit (DART) service for persons with disabilities that do not require the use of regular CMRTA/Comet fixed routes (CMRTA 2015).

Lexington County community facilities that can be accessed from the bus routes include the Columbiana Centre, Lexington Medical Center, the Riverbanks Zoo and Garden, and the West Columbia Riverwalk area. Richland County facilities that can be accessed from the bus routes include the St. Andrews/Richland County Public Library and the Dutch Square Center.

Pedestrian and Bicycle Amenities

There are existing and proposed sidewalks and bicycle lanes scattered throughout the CSA, particularly in the more urban, incorporated areas, such as Irmo, Columbia, and West Columbia. However, there are no continuous north-south or east-west pedestrian/bicycle facilities through the CSA. There is popular support for expanding bicycle and pedestrian facilities in the Columbia metropolitan area. SCDOT is prepared to assist the City of Columbia and CMCOG efforts by evaluating the recommendations made in the *Walk Bike Columbia* plan that may be appropriate for inclusion in the Carolina Crossroads Project and accommodating planned bicycle/pedestrian facilities that cross the corridor. Sidewalks are provided along many arterial streets and local

3. Existing Conditions and Environmental Consequences

streets within the CSA, though some arterials and local streets do not have sidewalks on one or both sides of the road.

There are also recreational trails throughout the CSA. The trails in Lexington County portion of the CSA are located in the Riverbanks community. They include trails at the W. Wilson Howard Park adjacent to Northside Middle School, the Riverbanks Zoo and Garden, and the Three Rivers Greenway (existing and proposed sections). The trails in the Richland County portion of the CSA include the Harbison (Harbison community) and Quail Valley (Columbiana community) neighborhood trails, and nine trails in the Harbison Environmental Education Forest (all in the Harbison community). One additional trail is located at Columbia High School (St. Andrews community). The Saluda Riverwalk is a multi-use trail greenway trail currently under construction along the Saluda River adjacent to I-126 and portions of I-26. The project includes approximately 2.5 miles of concrete trail from I-26 along the Saluda River, and continues past Riverbanks Zoo to the confluence of the Saluda and Broad Rivers. A future section of the Saluda Riverwalk will cross under the existing I-26 bridge over the Saluda River and continue adjacent to I-26 to the Lexington Hospital.

Airports\Waterways\Rail

There are no airports (commercial or general aviation) in the CSA. There are two major waterways in the CSA. The Saluda River flows from the Appalachian Mountains to Lake Murray (just northwest of the CSA) and through the CSA to join with the Broad River in forming the Congaree River. The Saluda River forms the boundary between the Seven Oaks and Saluda communities, and between the Riverbanks and Broad communities. The river also serves as the boundary between Lexington and Richland Counties in the southern portion of the CSA. The Lower Saluda is designated as a State Scenic River and a river trail runs through the CSA. The Broad River flows from the Appalachian Mountains southward through Richland County portions of the CSA to join the Saluda River to become the Congaree River. The Broad River serves as the eastern boundary of the CSA. There are recreational uses along the Broad River.

A CSX railroad extends between Lake Murray (and points northward), along St. Andrews and Bush River Roads, and between the Saluda River and I-126 before heading eastward into downtown Columbia. This rail corridor is located in the Lexington County portion of the CSA, in the Columbiana and Saluda communities.

3.3.4.6 Environmental Justice Populations

Environmental Justice (EJ) focuses on identifying and addressing disproportionately high and adverse human health or environmental effects of the project activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens. This objective is to be achieved, in part, by actively adhering to the principles and practices of both Title VI and the NEPA Executive Order 12898 during the development and implementation of transportation activities. Title VI was authorized under the Civil Rights Act of 1964 and prohibits the discrimination on the basis of race, color or national origin in programs receiving Federal assistance.

EJ populations were identified through analysis of U.S. Census Bureau data at the county level (Richland and Lexington Counties), the CSA level and the Block Group level. Concentrations of minority and low-income

3. Existing Conditions and Environmental Consequences

populations in the CSA were identified through analysis of the 2010 U.S. Census data and the 2009-2013 American Community Survey 5-year data at both the county and the Block Group level. Individual Block Group data was compared to the respective countywide data to determine whether any of the Block Groups would qualify as an “EJ Block Group” within the CSA (see Figures 3.3-3 through 3.3-9). An EJ Block Group was defined to include any Block Group in which the minority or low-income population meets either of the following:

- The minority or low-income population in the Block Group exceeds 50 percent
- The percentage of a minority or low-income population in the affected area is higher than the average for Richland or Lexington County.

The overall percentage of minorities in Richland County is 55.1 percent, and in Lexington County 23.3 percent. The low-income population in Richland County is 27.9 percent, and in Lexington County it is 23.1 percent. See Table 3.3-18 for EJ population data; highlights show those Block Groups that meet the above EJ criteria. EJ populations are discussed within each individual community below.

Table 3.3-18 Environmental Justice Populations

Community / Census Tract	Block Group	Total Population	Minority	% Minority	Low Income	% Low Income
Lexington County		266,575	62,202	23.3%	60,987	23.1%
Columbiana						
103.05 (located in Richland County)	1	1,111	429	38.6%	394	35.5%
	2	1,092	395	36.2%	194	17.8%
	3	764	348	45.5%	146	19.1%
	4	1,717	567	33.0%	402	24.0%
	5	1,262	733	58.1%	672	53.2%
	6	1,192	471	39.5%	24	2.0%
211.12	1	1,675	296	17.7%	185	11.2%
	2	1,575	261	16.6%	276	17.6%
211.11	1	903	244	27.0%	69	7.6%
	2	767	236	30.8%	163	21.3%
	3	763	465	60.9%	207	27.1%
Seven Oaks						
211.06	1	1,097	0	0.0%	153	13.9%
	2	734	253	34.5%	64	8.7%
	3	613	87	14.2%	41	6.7%
	4	523	50	9.6%	0	0.0%
205.11	1	1,323	501	37.9%	152	11.5%
	2	1,076	540	50.2%	125	12.7%
	3	980	722	73.7%	332	33.9%

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Community / Census Tract	Block Group	Total Population	Minority	% Minority	Low Income	% Low Income
205.10	1	1,531	629	41.1%	222	14.5%
	2	1,319	492	37.3%	78	5.9%
	3	927	783	84.5%	631	68.1%
	4	1,137	466	41.0%	374	32.9%
Saluda						
205.06	1	692	319	46.1%	298	50.4%
	2	1,857	148	8.0%	69	3.8%
	3	1,203	441	36.7%	378	32.9%
Riverbanks						
205.05	1	2,325	821	35.3%	763	33.1%
	2	1,539	1,112	72.3%	797	51.8%
205.08	1	1,611	87	5.4%	118	7.8%
	2	744	30	4.0%	30	4.0%
205.09	1	1,058	108	10.2%	110	10.4%
	2	949	170	17.9%	128	13.7%
	3	382	285	74.6%	189	49.5%
	4	819	669	81.7%	521	63.6%
Richland County		389,708	214,605	55.1%	101,442	27.9%
Harbison						
103.04	1	1,839	727	39.5%	258	14.0%
	2	1,241	775	62.4%	465	37.5%
	3	1,929	1,156	59.9%	271	14.4%
	4	1,210	1,044	86.3%	608	50.2%
103.09	1	4,328	1,384	32.0%	109	2.5%
	2	2,911	1,099	37.8%	834	28.7%
	3	2,054	920	44.8%	265	12.9%
103.08	1	2,475	1,044	42.2%	158	6.6%
	2	3,050	893	29.3%	471	15.4%
St. Andrews						
104.07	1	1,518	1,251	82.4%	354	23.3%
	2	2,201	2,030	92.2%	1,312	59.6%
	3	1,160	946	81.6%	319	27.5%
104.08	1	5,683	4,095	72.1%	59	100.0%
104.09	1	1,627	1,333	81.9%	786	48.3%

3. Existing Conditions and Environmental Consequences



Community / Census Tract	Block Group	Total Population	Minority	% Minority	Low Income	% Low Income
104.10	1	1,718	1,401	81.5%	596	34.7%
	2	532	311	58.5%	188	40.1%
	3	1,184	1,130	95.4%	533	45.0%
104.11	1	1,693	1,494	88.2%	1,119	66.1%
	2	433	361	83.4%	161	38.1%
	3	1,181	992	84.0%	784	66.4%
Broad						
104.03	1	989	501	50.7%	196	20.1%
	2	489	320	65.4%	273	55.8%
	3	2,319	1,515	65.3%	675	29.1%
104.13	1	1,616	1,198	74.1%	832	52.1%
	2	392	181	46.2%	104	26.5%
104.12	1	1,667	1,304	78.2%	751	45.1%
	2	2,040	1,177	57.7%	1,010	49.5%
Study Area		86,739	43,740	50.4%	21,796	27.1%

Source: U.S. Census Bureau, American Community Survey 5-year Estimates (2009-2013) Tract and Block Group data

Columbiana

The demographic characteristics within the Columbiana community, based on the U.S. Census Bureau data, are shown in Table 3.3-1. The LEP population in this community (1.4 percent) is less than the county average of 3.2 percent. The percentage of the population over the age of sixty-five within Columbiana is 13.2 percent, compared to the county average of 36.7 percent.

The minority population of the Columbiana community makes up 34.7 percent of the total population, higher than that of the entirety of Lexington and Richland County, which contain 23.3 and 55.1 percent, respectively. Of the total population, 21.2 percent is considered low-income, slightly less than the county average of 23.1 percent. Five out of 11 Block Groups are categorized as EJ Block Groups within Columbiana. Many of these EJ Block Groups are located near the proposed interchange improvements at I-26/Broad River Road, I-26/Harbison Boulevard and I-26/Piney Grove Road. Of the five EJ Block Groups, two groups exceed both the minority and low-income EJ criteria.

Seven Oaks

The demographic characteristics within the Seven Oaks community, based on the U.S. Census Bureau data, are shown in Table 3.3-1. The LEP population in this community (2.4 percent) is less than the county average of 3.2 percent. The percentage of the population over the age of sixty-five within Seven Oaks is 38.1, the highest concentration of elderly residents within the CSA.

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The minority population of the Seven Oaks community makes up 40.2 percent of the total population, higher than that of Lexington County, which contains 23.3 percent. Of the total population, 19.4 percent is considered low-income, slightly less than the Lexington County average of 23.1 percent. Within the Seven Oaks community, eight out of 11 Block Groups are categorized as EJ Block Groups. Seven Oaks contains the highest concentration of minority and low-income populations within the Lexington County portion of the CSA, at 84.5 percent and 68.1 percent respectively, in Census Tract (CT) 205.10, Block Group (BG) 3. Many of the EJ Block Groups are located around the proposed interchange improvements at I-26/Piney Grove Road, I-26/St. Andrews Road, I-20/I-26 and I-20/Bush River Road. Of the eight EJ Block Groups, three groups exceed both the minority and low-income EJ criteria.

Saluda

The demographic characteristics within the Saluda community, based on the U.S. Census Bureau data, are shown in Table 3.3-1. Saluda has the lowest minority population in the CSA. The LEP population in this community (5.8 percent) is more than the county average of 3.2 percent. The percentage of the population over the age of sixty-five within Saluda is 29 percent, compared to Lexington County's average of 12.8 percent.

The minority population of the Saluda community makes up 24.2 percent of the total population, lower than that of Lexington County, which contains 23.3 percent. Of the total population, 20.9 percent is considered low-income, slightly less than the Lexington County average of 23.1 percent. Within the Saluda community, two of the three Block Groups are categorized as EJ Block Groups. These EJ Block Groups are located in the southern portion of the Saluda community near the I-26/US-378 (Sunset Boulevard) interchange. Both of the EJ Block Groups exceed both the minority and low-income EJ criteria.

Riverbanks

The demographic characteristics within the Riverbanks community, based on the U.S. Census Bureau data, are shown in Table 3.3-1. The LEP population in this community is also the highest of all communities in the CSA, at 10.2 percent, notably higher than the county average of 3.2 percent. The percentage of the population over the age of sixty-five within Riverbanks is 10.2 percent, lower than that of Lexington County.

The minority population of the Riverbanks community makes up 34.8 percent of the total population, higher than that of Lexington County, which contains 2.23 percent. Of the total population, 28.6 percent is considered low-income, which is more than the Lexington County average of 23.1 percent. Within the Riverbanks community, four of the eight Block Groups are categorized as EJ Block Groups. Riverbanks contains the second highest percentages of minority and low-income populations within the Lexington County portion of the CSA, in CT 205.09 BG 4, at 81.7 percent and 63.6 percent respectively. These EJ Block Groups are located in the southern portion of the community, south of the proposed RA footprints. All of the EJ Block Groups exceed both the minority and low-income EJ criteria.

Harbison

The demographic characteristics within the Harbison community, based on the U.S. Census Bureau data, are shown in Table 3.3-1. The LEP population in this community (1.9 percent) is less than the county average of 3

3. Existing Conditions and Environmental Consequences

percent. The percentage of the population over the age of sixty-five within Harbison is 9.7 percent, which is lower than the county average of 32.5 percent.

The minority population of the Harbison community makes up 43 percent of the total population, lower than that of Richland County, which contains 50.5 percent. Within the Harbison community, four of the nine Block Groups are categorized as EJ Block Groups. These EJ Block Groups are located around the proposed interchange improvements at I-26/Harbison Boulevard and I-26/Piney Grove Road. Of the four EJ Block Groups, two exceed both the minority and low-income EJ criteria.

St. Andrews

The demographic characteristics within the St. Andrews community, based on the U.S. Census Bureau data, are shown in Table 3.3-1. The LEP population in this community (2.4 percent) is slightly less than the county average of 3 percent. The percentage of the population over the age of sixty-five within St. Andrews is 2.4 percent, which is the lowest percentage in the CSA and lower than the county average of 32.5 percent.

The minority population of the St. Andrews community makes up 81.1 percent of the total population; this is the highest concentration of a minority population of all communities in the CSA and is notably higher than that of Richland County, which contains 55.1 percent minority. Within the St. Andrews community, all of the 11 Block Groups are categorized as EJ Block Groups. Of the eleven EJ Block Groups, nine exceed both the minority and low-income EJ criteria.

Broad

The demographic characteristics within the Broad community, based on the U.S. Census Bureau data, are shown in Table 3.3-1. The LEP population in this community (2.7 percent) is less than the county average. The percentage of the population over the age of sixty-five within Broad is 7.1 percent, which is lower than the county average of 32.5 percent.

The minority population of the Broad community makes up 65.1 percent of the total population, the second highest concentration of minority residents in all communities in the CSA and slightly higher than that of Richland County, which contains 55.1 percent. Within the Broad community, five of the seven Block Groups are categorized as EJ Block Groups. Nearly the entire community meets the EJ criteria for minority or low-income. All of the EJ Block Groups exceed both the minority and low-income EJ criteria.

3.3.4.7 Other Special Populations

Disabled Individuals

Individuals with disabilities vary in their need for support services to achieve and maintain independence. Table 3.3-19 summarizes the estimated number of individuals with disabilities in the United States; State of South Carolina; and Lexington and Richland Counties.¹¹ The estimates are for sensory, physical, mental, self-care, homebound, and employment-related disabilities. Available data for 2009-2013 indicate that the Lexington and

¹¹ Recent disability data is not available from the U.S. Census Bureau at the city, town, or census block level.

3. Existing Conditions and Environmental Consequences

Richland Counties disabled population percentage is below that of the state level. No residential locations dedicated specifically to serving disabled individuals have been identified in the CSA.

Table 3.3-19 Individuals with Disabilities

Geographic Area	Total Civilian Non-Institutionalized Population with a Disability	Percent of Population Which is Disabled
United States	35,655,705	14.4%
South Carolina	600,253	16.6%
Lexington County	27,579	13.2%
Richland County	39,244	13.6%

Note: The U.S. Census Bureau includes disability status of the civilian non-institutionalized population as a consideration under its five-year estimates for selected social characteristics in the United States.

Source: U.S. Census Bureau 2009-2013 American Community Survey 5-Year Estimates

Organizations and programs available to assist disabled individuals in the CSA include Disability Action Center, Able South Carolina and Bright Start. Disability Action Center, located in the Harbison community, is a part of the Able South Carolina organization. Able South Carolina is a Center for Independent Living, a consumer-controlled, community-based, cross-disability nonprofit that provides an array of independent living services to people of all ages with all types of disabilities, in 23 counties in South Carolina. Able South Carolina has a second location in the CSA in the Broad community. Bright Start, located adjacent to this location of Able South Carolina in the Broad community, is a private provider that offers early intervention services to children with disabilities and special needs.

Elderly Individuals

Elderly individuals are considered a vulnerable population; challenges and concerns for the elderly include health care, social isolation, limited mobility, and fixed incomes. As noted in Table 3.3-1, 12.6 percent of residents in the CSA are 65 or older. This percentage is higher than that of Richland County (10.2 percent), but slightly lower than that of Lexington County (12.8 percent). Within the CSA, the communities with the highest percentage populations of elderly individuals are Seven Oaks (38.1 percent) and Saluda (29 percent). The communities with the lowest percentage populations of elderly individuals are St. Andrews (4.3 percent) and Broad (7.1 percent).

There are no known 55 and older residential communities identified near the corridor or interchanges within the CSA. There are four known assisted living, nursing home, and rehabilitation complexes located near the corridor or interchanges within the CSA. These include Harbor Chase and Brookdale Harbison in the Harbison community, Brian Center Nursing Care in the Seven Oaks community, and The Columbia Presbyterian Community in the Saluda community. These facilities provide a range of care, from independent living to memory care. No other elderly communities were identified within the CSA.

Central Midlands Council of Governments (CMCOG) was designated as the midlands’ Area Agency on Aging in 1976. The mission of the Area Agency on Aging is to plan programs and services for the growing population of older people in Lexington, Richland, Fairfield, and Newberry Counties. The agency subcontracts with local

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providers for delivery of services. The Regional Aging Advisory Committee, the majority of whom are older individuals or individuals who are eligible to participate in Older Americans Act programs, representatives of older persons and the general public, assists the Council of Governments in fulfilling the responsibilities of the Area Agency on Aging.¹²

Limited English Proficiency Populations

The Department of Justice's (DOJ) Safe Harbor Limited English Proficiency (LEP) threshold is met when there is a language group that speaks English less than very well and that either consists of 1,000 adults or comprises 5 percent of the overall CSA population, whichever is less. Based on the demographic analysis, the CSA exceeds the DOJ's Safe Harbor thresholds for Spanish-speaking populations.

The highest concentrations of the Spanish-speaking populations are located in the Riverbanks, St. Andrews and Saluda communities. While the federal threshold for LEP is not exceeded by Asian-language and Indo-Euro-language speaking populations within the CSA, there are larger concentrations of Indo-Euro and Asian-language speaking populations within the St. Andrews community.

As part of the DEIS public comment period outreach efforts, Spanish interpreters were available at the public information sessions and meetings, newspaper ads and press releases were translated into Spanish, and project materials were translated into Spanish when needed. Finally, the project website included translating features for project information to help ensure equal opportunity and access for LEP populations.

3.3.5 HOW WOULD THE RECOMMENDED PREFERRED ALTERNATIVE AND THE REFINED RECOMMENDED PREFERRED ALTERNATIVE IMPACT COMMUNITIES?

The following sections address potential effects of the RPA and the Refined RPA on the communities within the CSA. High priority has been given to avoiding and minimizing community disruption during the evaluation and selection of the alternatives. The information contained here is summarized from the Community Impact Assessment. Due to the large community CSA and the quantity of areas affected, a matrix was developed to better organize and present potential impacts to communities within the CSA. This matrix is presented in Table 3.3-29. Further information on impacts to communities and neighborhoods can be found in the Community Impact Assessment located in Appendix G.

Throughout the CSA, the RPA and the Refined RPA would have varying impacts but similar in scale and proportion on all communities related to visual/aesthetics; community services; mobility, access and safety; economics; and construction. Refer to Table 3.3-20 for potential negative community impacts by alternative. If specific impacts to these resources occur within a community, they are discussed in the individual community sections below. Potential impacts to mobility, access and safety at I-26/Bush River Road are discussed in Section

¹² <https://centralmidlands.org/about/aging-services.html>. Central Midland Council of Governments.

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3.3.5.7. The project would also provide many benefits to local communities which are discussed in detail in Section 3.3.5.9.

3.3.5.1 Visual/Aesthetics

Overall, the proposed project is not expected to introduce new visual elements, as it would be constructed in an existing transportation corridor within a predominantly developed area. Visual and aesthetic impacts may occur at individual sites within the CSA. These could include removal of trees, lighting issues, elevation changes on various bridge structures, and construction of noise walls (refer to Chapter 3.5 for details on noise walls). Public comments expressing concerns over general aesthetics, such as added greenery, improved signage and artistic materials, were received at various public meetings.

3.3.5.2 Community Facilities and Services

In general, long-term vehicular, pedestrian and bicycle access to community services and facilities within the CSA would not be hindered, and in fact may improve as a result of the proposed project. Input from Emergency Medical Services (EMS) highlighted concerns that changes in ramp configurations along the interstate may not allow for convenient exiting for emergency vehicles as it does now, which may cause delays for the EMS vehicles. Altering access along the project corridor could affect EMS response times. Additional coordination was conducted with area Fire Departments and the SC Highway Patrol. SCDOT is committed to continued coordination with these agencies as the project progresses in to final design, construction and operation.

No schools or libraries would be displaced as a result of the RPA or the Refined RPA. Input from Lexington County school districts 1, 2 and 5, as well as Richland County school district 1, suggested concerns about traffic on the surrounding roads. This often impacts bus drivers and arrival times, as school buses often utilize the interstate system and surrounding roads. Changes in access for school bus routes would be discussed with the school systems well in advance of when they would actually take place, so the school systems can adjust routes in a timely manner. Requests for coordination during construction were also made from local school districts.

Direct impacts to churches or cemeteries are not anticipated within any community for the RPA or the Refined RPA.

The RPA would result in the full relocation of 110 residential properties, including 90 apartment units, while the Refined RPA would result in the full relocation of 95 residential properties, including 74 apartment units. Partial impacts are also anticipated and would occur when a portion of the subject property is needed, and the acquisition does not result in a harmful impact to current operations or living arrangements. Full acquisition, or relocation, would include acquiring the entire property and displacing the business or residence. The acquisition and relocation process would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (P.L. 91-646, as amended by 100-17; 49 CFR 24.205 (AF)).

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Public utility facilities have been identified within the CSA. Electricity, natural gas, communications (e.g., fiber), and water and sewer lines would be impacted throughout all communities within the CSA under either alternative. However, there are not expected to be any major disruptions to area services. Of particular note is:

Seven Oaks:

- A high pressure gas line (SCE&G) that crosses I-26 between Piney Grove Road and St. Andrews Road.
- A telephone/communications duct bank (AT&T) that crosses I-26 and travels along St. Andrews Road.
- Two power transmission lines that across I-20.
- A water line located along I-20.

Saluda:

- A water line (City of Columbia) located along I-20.

Harbison:

- A gas line (Dominion Gas) that crosses I-26 between Piney Grove Road and Harbison Boulevard.
- Cellular towers east of Piney Grove Road.
- A power transmission line that crosses I-26 between Piney Grove Road and Harbison Boulevard.
- Water lines on Harbison Boulevard and Lake Murray Boulevard (City of Columbia).

St. Andrews:

- A high pressure gas line (SCE&G) that crosses I-26 between Piney Grove Road and St. Andrews Road.
- A telephone/communications duct bank (AT&T) that crosses I-26 and travels along St. Andrews Road.
- A water line located between St. Andrews Road and I-20/26.
- A sewer main along the railroad between along I-20 near the Broad River.

Broad:

- A power transmission line on Colonial Life Boulevard.
- A water line located between St. Andrews Road and I-20/26.
- A sewer main (City of Columbia) along the railroad between I-26/I-126 and Colonial Life Boulevard.
- A sewer main (City of Columbia) along the railroad between along I-20 near the Broad River.
- A sewer pump (City of Columbia) station located near Colonial Life Boulevard.

Utility relocations are not expected to result in major disruptions to services within the communities discussed above.

3.3.5.3 Mobility, Access and Safety

The RPA and the Refined RPA both propose the relocation of the I-26/Bush River Road interchange. Access to Bush River Road from I-26 would be relocated under both alternatives; therefore direct access to Bush River Road from I-26 would be affected.

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With both alternatives, separating the traffic traveling to and from the mainline interchange using the collector – distributor roads and ramp systems, along with providing additional capacity along the interstate, is anticipated to reduce crashes resulting from vehicle weaving movement conflicts as well as from driver inattention in congestion conditions.

Detailed descriptions of proposed improvements and potential access changes within the project study for each alternative and interchange area are included in Chapter 2.

Impacts to travel patterns throughout the rest of the CSA are expected to be minimal. There may be slight differences in the ramp locations and movements at the reconstructed interchanges but overall, community mobility, access and safety are expected to improve from the reduced congestion in the CSA. Except where discussed in section 3.3.5.7, namely the I-26/Bush River Road interchange, impacts to the existing roadway network would be minimal.

Traffic would be temporarily disrupted during construction of the proposed project. A maintenance of traffic plan would be maintained during construction (refer to Chapter 3.13).

3.3.5.4 Economics

Providing improved mobility and reduced congestion could enhance economic opportunities for existing businesses and encourage new businesses to locate in the CSA. Unless discussed below, while business access may be reduced temporarily during construction, long-term negative economic effects are not anticipated with the RPA or the Refined RPA. The most obvious benefit of the project is accident cost reduction, meaning a reduction in the cost of crashes and property damage. This benefit would be realized similarly throughout all communities. Additional information on potential economic impacts is discussed in 3.3.5.9.

3.3.5.5 Construction/Temporary Impacts

Typical short-term construction impacts include dust, noise and vibration, traffic disruption, congestion and diversion as well as limited or temporary reduction in access for businesses. Motorist, pedestrians, and bicyclists would be temporarily impacted during construction as traffic detours and some temporary road closures would be required and would change frequently throughout construction. Changes in roadway conditions on the I-20/26/126 corridor, along with the arterial roadways and minor roads, could include rerouting of traffic onto other roads, temporary closure of lanes or sections of roads, and temporary lane shifts. Detours and road closures could temporarily increase vehicle commute times, fuel use, and air pollutant emissions. Construction could also temporarily increase response times for emergency service vehicles. In addition, access to residential and commercial areas could also be temporarily disrupted, resulting in longer commute times and a potential loss of revenue for some businesses.

To mitigate these impacts, the construction contractor would develop a maintenance-of-traffic plan that outlines measures to minimize construction impacts on transportation and traffic. A requirement of this plan would be that access to businesses and residences be maintained, to the extent practicable, and that existing roads be kept open to traffic unless alternate routes are provided. During construction, SCDOT would coordinate

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with local municipalities and/or trail groups to post information on temporary sidewalk or bicycle facility closures and detours.

Temporary construction easements may be needed for some properties to construct the build alternative. These properties are not included in the right-of-way analysis. SCDOT would temporarily use these properties during construction and would provide compensation to the landowner for the temporary use. The property would be fully returned to the owner when the use of the property is no longer required, typically when construction is complete. These properties may be temporarily affected, but no long-term impacts are expected.

The presence of large construction equipment may be perceived as visually disruptive and cause temporary effects to community character. Construction impacts to neighborhoods, businesses and the natural environment would be minimized where possible. Community outreach activities to educate the public on construction activities would occur pre-construction and during construction.

3.3.5.6 Special Populations

Direct impacts to elderly or disabled populations are not anticipated. A final determination would be made upon preliminary contact during the right-of-way acquisition process. Indirect impacts are anticipated on all populations within the study area and are discussed further in Chapter 3.15. LEP populations were identified within the CSA.

Table 3.3-20 presents the community impacts anticipated with the No-Build, the RPA and the Refined RPA. Impact descriptions are as follows:

- **Land Use:** Changes in land use could occur if the alternative results in growth-inducing effects or other effects such as inhibiting growth and development.
- **Community Cohesion:** An impact to neighborhood cohesion would occur if the community structure were disrupted, such as by a physical division of the neighborhood. Impacts to cohesion may affect the use of community services and facilities and social interaction.
- **Community Facilities and Services:** Impacts to community facilities and services occur if relocation, change in access, or response times are negatively affected.
- **Mobility, Access and Safety:** Impacts to mobility, access and safety would occur if the proposed project results in changes to neighborhood egress and ingress, loss of accessibility or decreases safety.
- **Visual/Aesthetic:** Visual and/or aesthetic impacts would occur if changes to existing conditions for those elements resulted from the alternative.
- **Noise:** Noise impacts would occur if noise levels rise about FHWA's noise abatement criteria.
- **Acquisitions:** Acquisition impacts would occur if a portion of a person's property is acquired or a person has to be displaced from their home or business as a result of the alternative.

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Table 3.3-20 Community Impact Matrix - Potential Adverse Impacts*

Community	Type of Impact	RPA	Refined RPA	No-Build
Columbiana	Land Use	No	No	No
	Community Cohesion	No	No	No
	Community Facilities and Services	No	No	No
	Mobility, Access and Safety	No	No	Yes
	Visual/Aesthetics	Yes	Yes	No
	Noise	Yes	Yes	Yes
	Residential Acquisitions (Full and Partial)	Yes	No	No
	Residential Acquisitions within EJ Block Group	Yes	No	No
	Business Acquisitions (Full and Partial)	Yes	Yes	No
	Business Acquisitions within EJ Block Group	Yes	Yes	No
Seven Oaks	Land Use	Yes	Yes	No
	Community Cohesion	No	No	No
	Community Facilities and Services	Yes	Yes	No
	Mobility, Access and Safety	Yes	Yes	Yes
	Visual/Aesthetics	Yes	Yes	No
	Noise	Yes	Yes	Yes
	Residential Acquisitions (Full and Partial)	Yes	Yes	No
	Residential Acquisitions within EJ Block Group	Yes	Yes	No
	Business Acquisitions (Full and Partial)	Yes	Yes	No
	Business Acquisitions within EJ Block Group	Yes	Yes	No
Saluda	Land Use	No	No	No
	Community Cohesion	No	No	No
	Community Facilities and Services	No	No	No
	Mobility, Access and Safety	No	No	Yes
	Visual/Aesthetics	Yes	Yes	No
	Noise	Yes	Yes	Yes
	Residential Acquisitions (Full and Partial)	No	No	No
	Residential Acquisitions within EJ Block Group	No	No	No
	Business Acquisitions (Full and Partial)	Yes	Yes	No

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Community	Type of Impact	RPA	Refined RPA	No-Build
Saluda (con't)	Business Acquisitions within EJ Block Group	Yes	No	No
Riverbanks	Land Use	No	No	No
	Community Cohesion	No	No	No
	Community Facilities and Services	Yes	Yes	No
	Mobility, Access and Safety	No	No	Yes
	Visual/Aesthetics	Yes	Yes	Yes
	Noise	Yes	Yes	No
	Residential Acquisitions (Full and Partial)	No	No	No
	Residential Acquisitions within EJ Block Group	No	No	No
	Business Acquisitions (Full and Partial)	No	No	No
	Business Acquisitions within EJ Block Group	No	No	No
Harbison	Land Use	Yes	Yes	No
	Community Cohesion	No	No	No
	Community Facilities and Services	No	No	No
	Mobility, Access and Safety	No	No	Yes
	Visual/Aesthetics	No	No	No
	Noise	Yes	Yes	Yes
	Residential Acquisitions (Full and Partial)	Yes	Yes	No
	Residential Acquisitions within EJ Block Group	No	No	No
	Business Acquisitions (Full and Partial)	Yes	Yes	No
	Business Acquisitions within EJ Block Group	Yes	Yes	No
St. Andrews	Land Use	Yes	Yes	No
	Community Cohesion	No	No	No
	Community Facilities and Services	No	No	No
	Mobility, Access and Safety	No	No	Yes
	Visual/Aesthetics	Yes	Yes	No
	Noise	Yes	Yes	Yes
	Residential Acquisitions (Full and Partial)	Yes	Yes	No
	Residential Acquisitions within EJ Block Group	Yes	Yes	No
	Business Acquisitions (Full and Partial)	Yes	Yes	No

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Community	Type of Impact	RPA	Refined RPA	No-Build
St. Andrews (con't)	Business Acquisitions within EJ Block Group	Yes	Yes	No
Broad	Land Use	Yes	Yes	No
	Community Cohesion	No	No	No
	Community Facilities and Services	Yes	Yes	No
	Mobility, Access and Safety	Yes	Yes	Yes
	Visual/Aesthetics	Yes	Yes	No
	Noise	Yes	Yes	Yes
	Residential Acquisitions (Full and Partial)	Yes	Yes	No
	Residential Acquisitions within EJ Block Group	Yes	Yes	No
	Business Acquisitions (Full and Partial)	Yes	Yes	No
	Business Acquisitions within EJ Block Group	Yes	Yes	No

*The project would also provide many benefits to local communities which are discussed in detail in Section 3.3.5.9.

3.3.5.7 Communities

Potential land use, visual and aesthetic, noise and vibration and acquisition impacts of the RPA and the Refined RPA are discussed in the following sections. These impacts include additional through traffic based on the construction of a new connector. Projected growth and planned development in each community is discussed in Chapter 3.1. Impacts to community facilities, community cohesion and travel patterns and environmental justice are discussed by community beginning in section 3.3.4.4. Information concerning noise impacts can be found in Chapter 3.5 and the Noise Technical Report in Appendix J.

Columbiana

Land Use

The Columbiana community is located in Richland and Lexington County, situated west of I-26 and north of Piney Grove Road. The majority of the community is residential. There are office uses along Lake Murray Boulevard and St. Andrews Road and commercial uses along Lake Murray Boulevard and Harbison Boulevard. The large, regional commercial centers of Columbiana Centre and Columbiana Station are both located near the Harbison Boulevard interchange at I-26.

Within the Columbiana community, land use impacts are mainly expected to occur at the I-26/Harbison Boulevard interchange where commercial uses would be converted to transportation uses for the RPA and the Refined RPA. Refer to Chapter 3.1 of the FEIS for additional information on Land Use.

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Visual/Aesthetics

Visual impacts are expected to be minimal in nearby neighborhoods, such as Country Walk Apartments. A change to the overall visual and aesthetic quality of the neighborhoods of the Columbiana community is not anticipated.

Noise

With the proposed RPA and the Refined RPA, widening along the mainlines of I-26, I-20 and I-126 would occur and move the outside travel lanes closer to receptors within neighborhoods along these roadways. Within the Columbiana community, noise receptors are expected to be impacted for both the RPA and the Refined RPA. Refer to Chapter 3.5 and the Noise Technical Report in Appendix J for additional information on potential noise impacts.

Acquisitions

Within the Columbiana community, the RPA would result in the relocation of two residential properties, located within the Country Walk Apartments along Jamil Road, west of I-26. These residential properties consists of two apartment buildings with 10 units each and provides space for 20 families at full occupancy. For non-residential properties, the RPA would result in the relocation of three tenants and one billboard.

Residential acquisitions consist of any residential property including single-family homes and apartment buildings.

Non-residential acquisitions consist of commercial, office, institutional and hotel properties.

Due to the design change of removing Giles Parkway, the Refined RPA would not require the relocation of residential properties, and would avoid a strip mall that contained three business tenants. However, one additional business relocation would be required due to the removal of Giles Parkway. Saturn Parkway was realigned to avoid a business relocation (hotel). Therefore, two non-residential relocations (businesses) and nine billboards would be acquired in the Columbiana area due to the Refined RPA. Partial residential acquisitions are not anticipated for either the RPA or the Refined RPA., Partial acquisitions of non-residential properties are anticipated for the RPA and the Refined RPA. Refer to Appendix I for relocation information. SCDOT is committed to continuing to work with affected communities throughout the design process.

Seven Oaks

Land Use

The Seven Oaks community is located in Lexington County, west of I-26 and south of Piney Grove Road. Like the Columbiana community, the majority of the Seven Oaks community is residential. There are some office uses along I-20, and institutional uses are concentrated along St. Andrews Road and Bush River Road. Commercial uses are concentrated near the I-26/St. Andrews Road and I-26/Bush River Road interchanges, while industrial uses are concentrated along the Saluda River.

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Within the Seven Oaks community, land use impacts are expected to occur at all interchanges within the community. Commercial, office, residential and industrial uses would be converted to transportation uses for the RPA and the Refined RPA. Refer to Chapter 3.1 of the FEIS for additional information on Land Use.

Visual/Aesthetics

The RPA proposes the construction of a new bridge over I-26 connecting Tram Road to the west and Beatty Road to the east; access to I-26 is not provided by this proposed bridge. The Whitcott neighborhood is approximately 700 feet west of the proposed bridge; however, there is a dense stand of trees between the neighborhood and the proposed bridge that would help to shield the bridge from view. The Refined RPA does not propose the construction of a new bridge over I-26 in this location so impacts to the above reference neighborhoods would not occur.

Residents on the northern side of the St. Andrews Apartments may incur minor visual impacts as a result of both alternatives because the interchange would be somewhat closer in proximity. Additionally, the alignment for both the RPA and the Refined RPA may result in minor visual impacts for residents on the eastern sides of Stoney Creek Apartments and eastern and southern sides of Peach Tree Apartments as the interchange would be closer in proximity.

Noise

With the proposed RPA and the Refined RPA, widening along the mainlines of I-26, I-20 and I-126 would occur and move the outside travel lanes closer to receptors within neighborhoods along these roadways. In addition with the construction of a new bridge over I-26 connecting Tram Road to the west and Beatty Road to the east for the RPA, an increase in traffic through the neighborhoods is anticipated although expected to be minor. Within the Seven Oaks community, noise receptors are expected to be impacted for the RPA and the Refined RPA. The Seven Oaks community contains the highest number of noise impacts. Refer to Chapter 3.5 and the Noise Technical Report in Appendix J for additional information on potential noise impacts.

Acquisitions

The Seven Oaks community contains the highest amount of anticipated residential unit relocations out of all of the communities. The RPA is estimated to result in the relocation of 8 residential buildings (including 70 apartment/condo units), as well as two single-family residences (including one mobile home). The Refined RPA is anticipated to result in the relocation of 10 residential buildings containing 74 apartment/condo units), and two single family residences (including one mobile home). Impacted apartment complexes include Peach Tree Apartments, St. Andrews Apartments and Stoney Creek Apartments. Partial acquisitions of residential properties are anticipated for the RPA and the Refined RPA.

With regards to non-residential relocations, the RPA would relocate 17 businesses, two of which are storage facilities, which contain a total of 1,050 storage units that are considered personal property relocations. The Refined RPA would acquire 32 businesses and one institutional facility. Of these 32 businesses, three are motel/hotels which may house long-term tenants that could qualify for relocation assistance. This would be further investigated during the right-of-way acquisition process. In addition, two of the businesses are storage

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facilities which contain 1,050 storage units that are considered personal property relocations. Refer to Appendix I for relocation information. Both the RPA and the Refined RPA would result in the partial acquisition of non-residential properties, refer to Table 2.6.

Saluda

Land Use

The Saluda community is located in Lexington County, west of the Saluda River and I-26. Much of the area north of I-20 is undeveloped. The majority of the community south of I-20 is residential. There are some office uses scattered throughout the community, and commercial uses are concentrated along US-378 (Sunset Boulevard). The community is anchored by the Lexington Medical Center at the interchange of I-26 and US-378 (Sunset Boulevard) which has plans for the construction of additional buildings on the existing medical campus.

Minimal land use impacts are anticipated within the Saluda community. Refer to Chapter 3.1 of the FEIS for additional information on Land Use.

Visual/Aesthetics

Visual changes are likely to occur in the nearby neighborhoods, such as Quail Apartments. Refer to Chapter 3.5 additional information on potential noise barriers.

Noise

With the proposed RPA and the Refined RPA, widening along the mainlines of I-26, I-20 and I-126 would occur and move the outside travel lanes closer to receptors within neighborhoods along these roadways. Within the Saluda community, noise receptors are expected to be impacted for both the RPA and the Refined RPA; a noise barrier is proposed west of the Saluda River, along the southern side of I-20, within the Saluda community. Refer to Chapter 3.5 and the Noise Technical Report in Appendix J for additional information on potential noise impacts.

Acquisitions

The relocation or partial acquisition of residential properties is not anticipated within the Saluda community with the RPA or the Refined RPA. Relocations of non-residential properties are not anticipated with the RPA or the Refined RPA; however, the RPA and the Refined RPA would partially acquire non-residential properties within the Saluda community.

Riverbanks

Land Use

The Riverbanks community is located in Lexington County, southeast of I-26 and west of I-126. The majority of this community is located within the city limits of West Columbia and is residential in nature. There are some office and institutional uses scattered throughout the community, and commercial uses are concentrated along the US-378 (Sunset Boulevard) and I-26 corridors. The Riverbanks Zoo and Botanical Garden sits on a large site

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along the Saluda River; the garden is located in the Riverbanks community, and the zoo is located across the river in the Broad community of Richland County.

Impacts to land use are not anticipated within the Riverbanks community. Refer to Chapter 3.1 of the FEIS for additional information on Land Use.

Visual/Aesthetics

The RPA and the Refined RPA have the potential to minimally affect the Saluda Riverwalk Extension of the Three Rivers Greenway¹³ due to the proposed construction of a bridge over the trail, likely resulting in a visual impact for trail users. However, existing bridge structures are in place today within the viewshed and as a result, a change to the overall visual and aesthetic quality of the neighborhoods or community is not anticipated.

Noise

With the proposed RPA and the Refined RPA, widening along the mainlines of I-26, I-20 and I-126 would occur and move the outside travel lanes closer to receptors within neighborhoods along these roadways. Within the Riverbanks community, noise receptors are expected to be impacted for the RPA and the Refined RPA. The Riverbanks community contains the least amount of noise impacts. Refer to Chapter 3.5 and the Noise Technical Report in Appendix J for additional information on potential noise impacts.

Acquisitions

Residential or non-residential relocations and acquisitions are not anticipated within the Riverbanks community with the RPA or the Refined RPA.

Harbison

Land Use

The Harbison community is located in Richland County, between I-26 and the Broad River. This community has the greatest amount of undeveloped land in the CSA. The majority of developed portions of the community are residential. There are some office and industrial uses scattered throughout the community, while commercial uses are concentrated along Broad River Road (US-176). This community is anchored by the Harbison Environmental Education Forest (formerly Harbison State Forest), which is situated on more than 2,000 acres in the southern portion of the Harbison community.

Because the Harbison community has the most undeveloped land within the CSA, population and employment is projected to increase greatly through 2040. Improved mobility with the proposed interchange improvements for the RPA and the Refined RPA could increase the desirability for development in the vicinity of the Broad River Road, Lake Murray Road and Piney Grove Road interchanges, all located within the Harbison community. Conversion of land uses to transportation uses consist mainly of commercial around the interchanges located within the Harbison community. Refer to Chapter 3.1 of the FEIS for additional information on Land Use.

¹³ The River Alliance. 2015. "Three Rivers Greenway." Accessed September 2, 2015. <http://riveralliance.org/3rg.html>.

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Visual/Aesthetics

A change to the overall visual and aesthetic quality of the neighborhoods or community is not anticipated. Visual and aesthetic impacts may occur at the Crestmont community with the proposed Fernandina Road connection using Fernandina Court for the RPA; however, there are presently dense trees between the neighborhood and the proposed roadway that would help to shield the road from view.

Noise

With the proposed RPA and the Refined RPA, widening along the mainlines of I-26, I-20 and I-126 would occur and move the outside travel lanes closer to receptors within neighborhoods along these roadways. Within the Harbison community, noise receptors are expected to be impacted for the RPA and the Refined RPA. Refer to Chapter 3.5 and the Noise Technical Report in Appendix J for additional information on potential noise impacts.

Acquisitions

Within the Harbison community, residential relocations are not anticipated for the RPA or the Refined RPA. For non-residential relocations, the RPA would result in seven non-residential relocations, including three office tenants, one industrial relocation (water tower), and three retail/commercial businesses (two restaurants and one retail business).

The Refined RPA would result in five non-residential relocations, including three billboards. Due to the removal of the realignment of Fernandino Court with Fernandino Road, due to its potential impact to a high hazard dam, non-residential relocations were reduced by two, which include two restaurants. Refer to Appendix I for relocation information. Partial acquisitions of residential and non-residential properties are anticipated, refer to Table 2.6.

St. Andrews

Land Use

The St. Andrews community is located in Richland County, east of the Saluda River and I-26 and just northeast of the I-20/26 interchange. Several correctional institutions encompass large tracts of land in this community. The remainder of the community is predominantly residential. Commercial uses are concentrated along Broad River Road.

Conversion of land use to transportation uses consist mainly of commercial, office and residential around the interchanges located within the St. Andrews community. The interchanges within the St. Andrews community are generally already developed so any land use impacts are expected to occur as redevelopment or infill development. Refer to Chapter 3.1 of the FEIS for additional information on Land Use.

Visual/Aesthetics

Visual changes are likely to occur in the nearby neighborhoods, such as Raintree Apartments, Crossroads, Cherokee Gardens, Briargate and Emerald Valley. A change to the overall visual and aesthetic quality of the neighborhoods or community is not anticipated. Refer to Chapter 3.5 for additional information on potential noise barriers.

3. Existing Conditions and Environmental Consequences

Noise

With the proposed RPA and the Refined RPA, widening along the mainlines of I-26, I-20 and I-126 would occur and move the outside travel lanes closer to receptors within neighborhoods along these roadways. Within the St. Andrews community, noise receptors are expected to be impacted for both the RPA and the Refined RPA. Several impacted receptors are located within the Willow Creek neighborhood; however, since the noise study was conducted, most of the residences within Willow Creek have been demolished. Furthermore, building permits have not been obtained for the rebuild of Willow Creek; thus, based on unavailable information, noise receptors in the Willow Creek neighborhood were not modeled in the noise analysis. Refer to Chapter 3.5 and the Noise Technical Report in Appendix J for additional information on potential noise impacts.

Acquisitions

The RPA and the Refined RPA are estimated to relocate four residential properties within the St. Andrews community. It is anticipated that 16 non-residential tenants and one billboard would be relocated with the RPA and two tenants and nine billboards with the Refined RPA. Refer to Appendix I for relocation information. Partial acquisitions of residential and non-residential properties are anticipated, refer to Table 2.6.

Broad

Land Use

The Broad community is located in Richland County, situated between I-20 and I-126. The majority of the community is residential. There are some office and industrial uses scattered throughout the community, and commercial uses are concentrated along Bush River Road and Greystone Boulevard. The community is anchored by the Dutch Square Center, a large mall on Bush River Road. The Riverbanks Zoo is located in the southern portion of the community.

Impacts to land use around the interchanges located within the Broad community consist mainly of commercial, industrial and office uses. The interchanges within the Broad community are generally already developed so any land use impacts are expected to occur as redevelopment or infill development. According to the *Richland Renaissance Plan*¹⁴ (approved in 2017), a “start center” is being proposed near Bush River Road and Broad River Road. The start center would house a multi-modal transit center, business incubator and other attractions and would require site acquisition and re-development. Improved mobility with the proposed interchange improvements at I-126/Colonial Life Boulevard and I-20/Broad River Road for the RPA and the Refined RPA may accelerate this development. Refer to Chapter 3.1 of the FEIS for additional information on Land Use.

Visual/Aesthetics

Within the Broad community, both alternative alignments traverse through the Skyview Terrace neighborhood between the I-20/I-26 interchange and the Broad River Road interchange along I-20. Both alternative alignments would be somewhat closer to residents within the neighborhood, particularly residents on the northern side. However, the alternatives are not expected to introduce new visual elements to the community as a whole, as they would be constructed in an existing transportation corridor within an urban area. Minor visual impacts are

¹⁴ Richland County. 2017. “Richland Renaissance Master Plan.” Accessed January 31, 2018. <http://rcgov.us/Richland-Next>

3. Existing Conditions and Environmental Consequences

likely to occur in nearby neighborhoods, such as Three Rivers Apartments, Ashton at Longcreek, Carnaby Square and Essex Park Apartments. A change to the overall visual and aesthetic quality of the neighborhoods or community is not anticipated.

Noise

With the proposed RPA and the Refined RPA, widening along the mainlines of I-26, I-20 and I-126 would occur and move the outside travel lanes closer to receptors within neighborhoods along these roadways. Within the Broad community, noise receptors are expected to be impacted for the RPA and the Refined RPA; a noise barrier is proposed within the Broad community to the south of I-20, east of the Broad River Road interchange. Refer to Chapter 3.5 and the Noise Technical Report in Appendix J for additional information on potential noise impacts.

Acquisitions

Within the Broad community, the RPA would require the relocation of 14 residential properties, all single-family residences. The Refined RPA would require the relocation of 15 residential properties, all single-family homes.

The RPA would acquire a total of nine non-residential properties, including two institutional facilities, one industrial facility, and two billboards. Due to control of access being applied at the Broad River Road interchange with I-20, the Refined RPA would have 13 non-residential property acquisitions and six billboard acquisitions. With the Refined RPA, realignment of the I-20 westbound lanes resulted in the avoidance of the industrial facility. . Refer to Appendix I for relocation information. Partial acquisitions of residential and non-residential properties are anticipated, refer to Table 2.6.

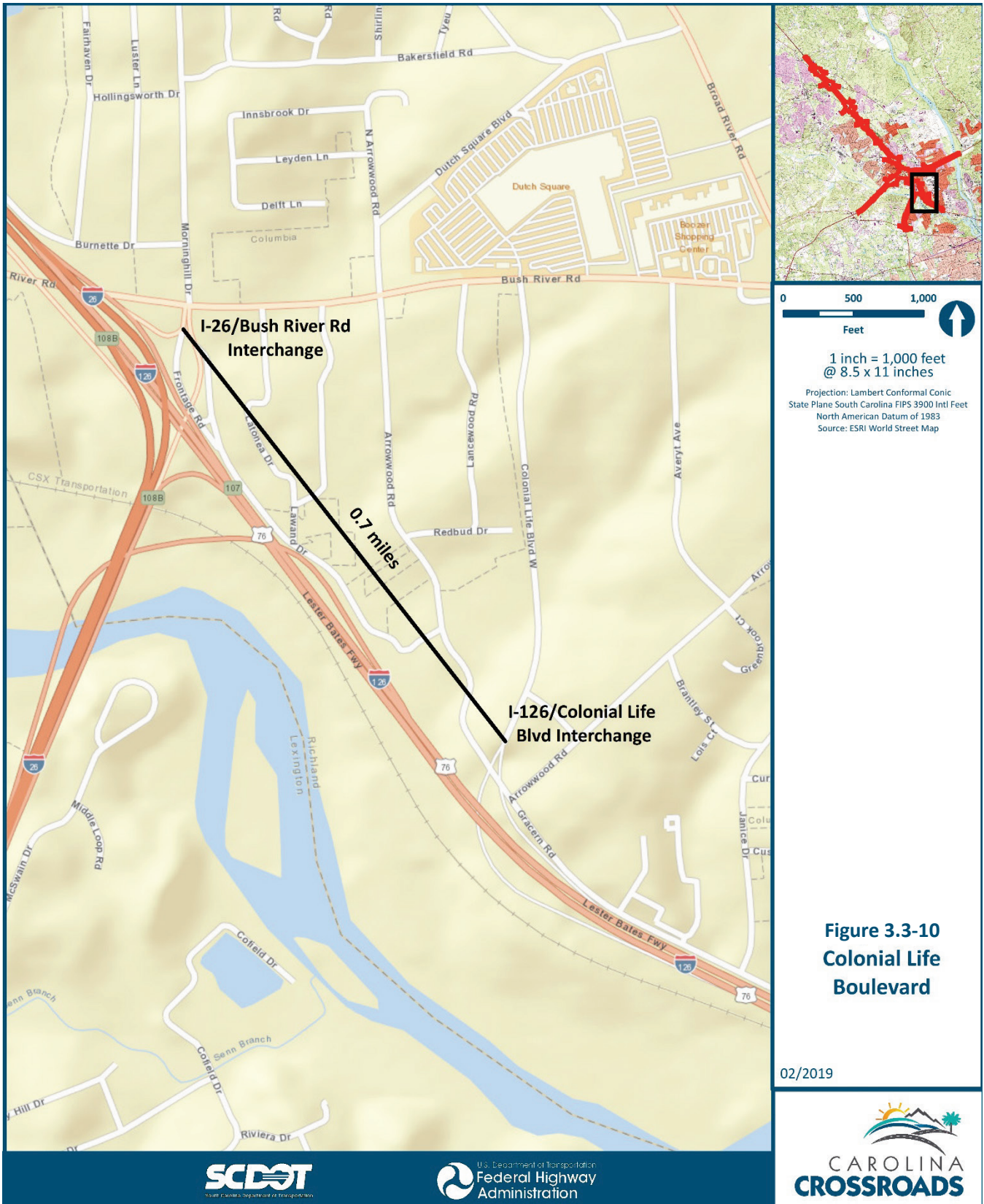
3.3.5.8 Businesses

It is anticipated that businesses along the project corridor would benefit from the enhanced access provided at the interchange locations of either alternative. At some interchange locations, this enhanced access may accelerate development of commercial or industrial uses; or would spur redevelopment, infill development, and/or revitalization with the commercial areas of the corridor. The primary location in the corridor where negative impacts to businesses could occur is within the Broad and Seven Oaks Community, near to the I-26/Bush River Road interchange. Therefore, the remainder of this section focuses specifically on that business community and the potential impacts to it.

I-26 / Bush River Road Interchange

Congestion and high crash rates on I-26 in the vicinity of the I-20/I-26 and I-26/Bush River Road interchange locations are attributed in part to abrupt driving maneuvers due to the multiple weaving movements that occur at these locations. To eliminate traffic conflict points and weaving maneuvers between these interchange locations, the I-26/Bush River Road interchange would be relocated approximately 0.7 miles to the southeast to an improved, full access interchange at Colonial Life Boulevard under the RPA and the Refined RPA (refer to Figure 3.3-10). During project development, some business owners voiced their concerns about the closure of the existing I-26/Bush River Road interchange and relocation to Colonial Life Boulevard. Business owners arranged a meeting that SCDOT attended on March 1, 2018. As a result of these discussions, the project team conducted further investigation on the potential impact to these businesses.

3. Existing Conditions and Environmental Consequences



3. Existing Conditions and Environmental Consequences

Table 3.3-21 Peak-hour Traffic Volumes on Bush River Road

Bush River Road Location	2015 Volume (Existing)			
	AM		PM	
	EB	WB	EB	WB
I-26 WB Ramps to Arrowwood Rd	1,752	950	1,239	1,727

Bush River Road Location	2040 Volume (No-Build)			
	AM		PM	
	EB	WB	EB	WB
I-26 WB Ramps to Arrowwood Rd	1,880	1,076	1,262	1,693

Bush River Road Location	2040 Volume (RPA and Refined RPA)			
	AM		PM	
	EB	WB	EB	WB
Morninghill Dr to Arrowwood Rd	1,323	639	696	1,299

Change between Existing Conditions and Refined RPA	-24%	-33%	-44%	-24%
Change between No-Build Conditions and Refined RPA	-30%	-40%	-45%	-24%

To further understand the travel patterns on Bush River Road the project team analyzed origin-destination (O-D) data. Origin is where a trip begins, and destination is where a trip ends. O-D data was collected in the Carolina Crossroads project study area and was gathered from the South Carolina Statewide Travel Demand Model (SCSWM). Understanding where traffic is coming from and going to, can help to determine the possible impact on traffic of the reconfiguration of the I-26/Bush River Road interchange. As such, two destination zones along Bush River Road were identified. The first zone was located west of I-26, south of Bush River Road, opposite Zimalcrest Drive (approximately coinciding with the location of the Walmart shopping center). The second zone was located east of I-26, north of Bush River Road (coinciding with N Arrowwood Road).

To understand the travel patterns on Bush River Road, the project team analyzed origin-destination (O-D) data. Origin is where a trip begins and destination is where a trip ends. The data revealed that most traffic on Bush River Road is not coming from or going to I-26.

3. Existing Conditions and Environmental Consequences

As summarized in the following tables, the majority of local trips, originating inside of the study area, currently do not use the I-26 Bush River Road (Exit 108) off-ramps to access Bush River Road destinations at Zimalcrest Drive and Arrowwood Road. Instead, they are using alternate routes. With the exception of the PM WB I-26 ramp movements, alternate route access accounts for 80 percent to 90 percent of traffic with Zimalcrest and Arrowwood destinations during the morning and afternoon peak periods. In other words, the majority of the traffic on Bush River Road is local traffic that is not coming from or going to I-26 via the I-26/Bush River Road interchange. Likewise, under the No-build alternative, the majority of the traffic on Bush River Road would continue to be local traffic that is not utilizing the I-26/Bush River Road interchange.

The majority of the traffic on Bush River Road is local traffic that is not coming from or going to I-26 via the I-26/Bush River Road interchange.

Table 3.3-22 Exit 108 Destination Trips 2015 AM Peak Hour

Origins	Destinations							
	Zimalcrest Dr				N Arrowwood Rd			
	Alternate Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total	Alternate Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total
From I-26 EB	0	3	N/A	3	0	10	N/A	10
From I-26 WB	0	N/A	8	8	0	N/A	50	50
From I-20 WB	0	42	N/A	42	0	0	N/A	0
From I-20 EB	41	0	N/A	41	0	0	N/A	0
Local Trips	221	11	6	238	273	4	17	294
Total	262	56	14	332	273	14	67	354

Table 3.3-23 Exit 108 Destination Trips 2015 PM Peak Hour

Origins	Destinations							
	Zimalcrest Dr				N Arrowwood Rd			
	Alternative Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total	Alternative Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total
From I-26 EB	0	0	N/A	0	0	12	N/A	12
From I-26 WB	0	N/A	11	11	0	N/A	148	148
From I-20 WB	0	6	N/A	6	0	0	N/A	0
From I-20 EB	29	0	N/A	29	0	0	N/A	0
Local Trips	185	0	9	194	21	49	45	115
Total	214	6	20	240	21	61	193	275

3. Existing Conditions and Environmental Consequences

Table 3.3-24 Exit 108 Destination Trips 2040 AM Peak Hour

Origins	Destinations							
	Zimalcrest Dr				N Arrowwood Rd			
	Alternative Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total	Alternative Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total
From I-26 EB	0	3	N/A	3	0	11	N/A	11
From I-26 WB	0	N/A	10	10	0	N/A	60	60
From I-20 WB	0	51	N/A	51	0	0	N/A	0
From I-20 EB	49	0	N/A	49	0	0	N/A	0
Local Trips	263	12	8	283	325	5	21	351
Total	312	66	18	396	325	16	81	422

Table 3.3-25 Exit 108 Destination Trips 2040 PM Peak Hour

Origins	Destinations							
	Zimalcrest Dr				N Arrowwood Rd			
	Alternative Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total	Alternative Route Used	I-26 EB Off-Ramp	I-26 WB Off-Ramp	Total
From I-26 EB	0	1	N/A	1	0	14	N/A	14
From I-26 WB	0	N/A	14	14	0	N/A	173	173
From I-20 WB	0	8	N/A	8	0	0	N/A	0
From I-20 EB	34	0	N/A	34	0	0	N/A	0
Local Trips	221	0	12	233	24	59	52	135
Total	255	9	26	290	24	73	225	322

Though most of the traffic on Bush River Road is not going to or coming from I-26, the 30-40 percent decrease in pass-by traffic that would occur during peak travel hours would potentially have an impact on businesses on Bush River Road in the immediate vicinity of the existing interchange. To assess the potential economic impacts of the reconfiguration of I-26/Bush River Road interchange, data on businesses located in the immediate vicinity of the interchange were obtained from the ReferenceUSA U.S. Businesses database.¹⁵ This included the business types, number of employees, and sales volumes.

The potential economic impact area was defined as follows, accounting for the presence of two major roadway nodes nearby (I-20/ Bush River Road interchange and Broad River Road/Bush River Road intersection):

- West of I-26: the area is delineated by Stoop Creek to the west, I-20 to the north, and Saluda River to the south;
- East of I-26: the area is delineated by Arrowwood Road¹⁶ to the east and a ½-mile buffer on either side of Bush River Road.

¹⁵ ReferenceUSA gathers information from multiple directories and event-driven sources, including new business filings, daily utility connections, press releases, corporate websites, annual reports, user-generated feedback, and thousands of Yellow Page directories. ReferenceUSA complements and verifies this information by conducting extensive phone surveys of businesses.

¹⁶ Including businesses located immediately on the east side of Arrowwood Road.

3. Existing Conditions and Environmental Consequences

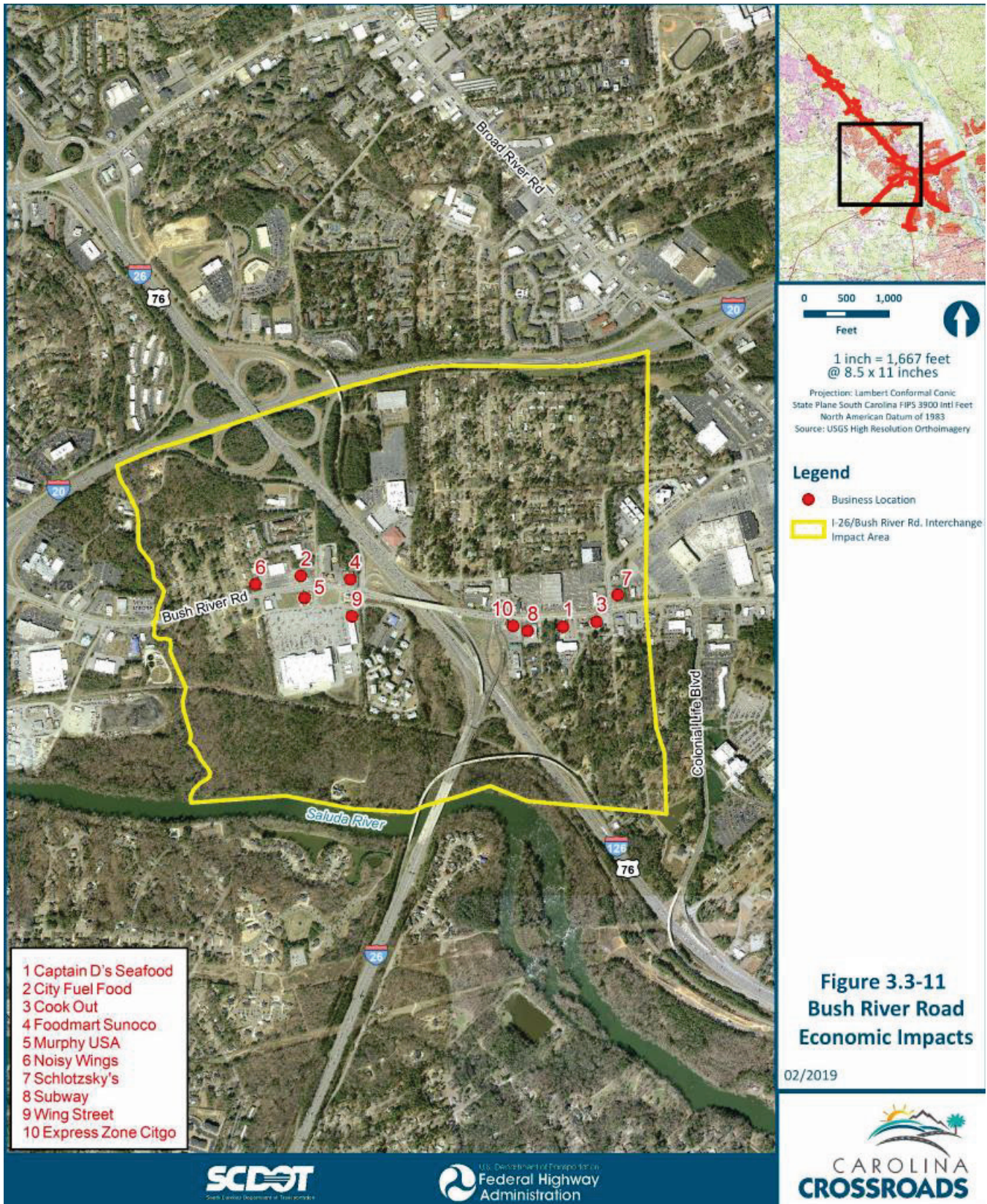
While businesses at the existing I-26/Bush River Road interchange would still be accessible via the I-126/Colonial Life Boulevard and I-20/Bush River Road interchanges, businesses on Bush River Road in the immediate vicinity of the existing interchange (refer to Figure 3.3.-10) would experience an approximate 30 to 40 percent decrease in pass-by traffic during the peak travel hours.¹⁷ A signing plan would be evaluated during final design to notify commuters of the new traffic patterns for accessing Bush River Road. Short-term construction related impacts to businesses are discussed in Section 3.3.5.5.

A map of the impact area is represented in Figure 3.3-11.

Businesses in the vicinity of the existing I-26/Bush River Road interchange would experience an approximate 30 to 40 percent decrease in pass-by traffic as a result of the RPA and the Refined RPA.

¹⁷ SCDOT. 2018. Alternatives Traffic Analysis Carolina Crossroads I-20/26/126 Corridor Improvements, Lexington and Richland Counties, South Carolina. Prepared by STV.

3. Existing Conditions and Environmental Consequences



3. Existing Conditions and Environmental Consequences

The analysis focused on businesses that would be the most affected by the reconfiguration of I-26/Bush River Road interchange, i.e. businesses that are heavily dependent on pass-by traffic because of the nature of the business. This included limited-service restaurants, convenience stores, gas stations, and retail stores, for a total of 10 businesses. Among retail stores, department stores were deemed not dependent on pass-by traffic and were removed from the sample. Likewise, hotels/motels were removed from the sample as these businesses are typically “destination” businesses. While interstate interchanges are common locations for hotels/motels for ease of access to travelers, business and leisure travelers typically reserve hotel rooms in advance, including the day of arrival.

The data collected on each of these businesses are presented in the table below.

Table 3.3-26 List of Affected Businesses

Company Name	Address	Primary NAICS	Primary NAICS Description	Industry Description	Employee Size	Sales Volume
Captain D’s Seafood	656 Bush River Rd	722513	Limited-Service Restaurants	Accommodation and Food Services	25	\$1,185,000
City Fuel Food	1301 Bush River Rd	445120	Convenience Stores	Retail Trade	4	\$842,000
Cook Out	600 Bush River Rd	722513	Limited-Service Restaurants	Accommodation and Food Services	7	\$332,000
Express Zone Citgo	830 Bush River Rd	447190	Other Gasoline Stations	Retail Trade	N/A	N/A
Foodmart Sunoco	1203 Bush River Rd	447190	Other Gasoline Stations	Retail Trade	5	\$3,556,000
Murphy USA	1330 Bush River Rd	445120	Convenience Stores	Retail Trade	7	\$1,473,000
Noisy Wings	1501 Bush River Rd	722513	Limited-Service Restaurants	Accommodation and Food Services	3	\$128,000
Schlotzsky’s	529 Bush River Rd	722513	Limited-Service Restaurants	Accommodation and Food Services	20	\$948,000
Subway	800 Bush River Rd	722513	Limited-Service Restaurants	Accommodation and Food Services	8	\$379,000
Wing Street	1320 Bush River Rd # C4	722513	Limited-Service Restaurants	Accommodation and Food Services	20	\$850,000
All Affected Businesses	N/A	N/A	N/A	N/A	99	\$9,693,000
All Businesses in Impact Area	N/A	N/A	N/A	N/A	1,264	\$256,130,000

Source: ReferenceUSA

3. Existing Conditions and Environmental Consequences

Conclusion: Though the majority of trips on Bush River Road are local trips that are not coming from or going to I-26 via the I-26/Bush River Road interchange, the projected reduction in traffic volumes on Bush River Road in the vicinity of the I-26 interchange could result in an impact to business and revenue of the surrounding businesses with the most negative impact relating to the 10 aforementioned businesses that are dependent on pass-by traffic. Ultimately, 10 businesses were considered in the analysis, including six limited-service restaurants, and four convenience stores and gas stations, accounting for 99 jobs and \$9.7 million in annual sales volume.¹⁸ These businesses represent 7.8 percent of total employment and 3.8 percent of total sales volume in the impact area. It is important to note that economics are difficult to forecast, information for forecasting 20 years is unavailable and control over development of local land use is not under the control of SCDOT. During the DEIS comment period, eight public comments were received regarding the reconfiguration of the Bush River Road interchange. Of those eight comments, one agreed with the reconfiguration, and the other comments included concerns about business impacts, access to Lexington Medical Center and the number of trees to be removed. These comments were evaluated against the purpose and need and it was determined that the reconfiguration of the Bush River Road interchange would still be necessary to reduce congestion and improve mobility by eliminating traffic conflict points and weaving maneuvers between Bush River Road and the I-20/I-26 interchange.

3.3.5.9 Economics and Employment

Economic Impact Analysis

The project team conducted an economic impact analysis (EIA) of the short-term (or temporary) economic impacts associated with capital expenses (preliminary design, construction, etc.) during the development phase of the project.

Economic impacts were measured in terms of:

- Employment (i.e., full-time and part-time jobs combined);
- Labor income (i.e., employee compensation and proprietor income);
- Value added (i.e., contribution to regional gross domestic product [GDP]); and
- Tax revenue (at the federal and state/local levels).

¹⁸ These estimates do not account for the Express Zone Citgo gas station for which no information was available from the ReferenceUSA database.

3. Existing Conditions and Environmental Consequences

Capital expenses incurred during the development phase of the project can be roughly divided into three main categories: construction; right-of-way; and professional services (such as engineering). Right-of-way expenses are typically not included in economic impact analysis because they represent a transfer of asset from one entity to another and generate minimal economic impacts (e.g., direct impacts from real estate activity).

Capital cost estimates used in the economic impact analysis for each alternative are summarized in Table 3.3-27.

The economic impact analysis involves the estimation of three types of effect:

- Direct effect: change in economic activity occurring as a result of direct spending by businesses (e.g., expenses related to construction activities);
- Indirect effect: change in economic activity resulting from purchases by local firms who are the suppliers to the directly affected businesses (e.g., spending by suppliers of the contractors responsible for construction activities and located in the study area); and
- Induced effect: change in economic activity associated with increased labor income that accrues to workers (of the contractors and all suppliers, in our example) and is spent on household goods and services purchased from businesses within the study area.

Table 3.3-27 Capital Expenses

Major Cost Category	RPA (\$Million)	Refined RPA (\$Million)
Construction	\$957.3	\$1,040.5
Planning, engineering and design	\$153.4	\$193.6
Environmental mitigation	\$3.3	\$3.3
Total	\$1,114.0	\$1,234.1

Notes: Construction employment occurs at the site of construction. Therefore, it is assumed that 100 percent of construction expenses would be incurred in Richland County and Lexington County combined. It is assumed that 50 percent of planning, engineering, and design expenses would be spent outside of South Carolina and are thus excluded from the economic impact analysis

A job-year is defined as one person employed for one year, whether part-time or full-time. The RPA would generate more than 10,600 job-years during the development phase of the project and the Refined RPA is expected to generate about 11,700 during the development phase (2017 – 2024). In other words, every \$110,000 and \$105,000, for the RPA and the Refined RPA respectfully, in capital expenses would generate one job-year on average. Employees filling these jobs would earn a cumulative \$510.2 million and \$565.7 million in wages and benefits for the RPA and the Refined RPA respectfully. Overall, the contribution to GDP is estimated at \$861 million and the contribution to taxes is estimated at \$179.8 million (including \$56.2 million in state and local taxes) statewide.

Direct expenses associated with construction, engineering and environmental services account for more than half of total employment impact. The indirect and induced effects of capital expenses represent slightly less than half of total employment impact.

3. Existing Conditions and Environmental Consequences

A summary of economic impacts at the state level is provided in Table 3.3-28 below.

Table 3.3-28 Summary of Cumulative Economic Impacts by Type of Effect – South Carolina (2017 – 2024)

Impact Metric	Direct	Indirect	Induced	Total
RPA				
Employment (job-years)	5,842	2,308	2,478	10,629
Labor income	\$293.6	\$120.6	\$96.0	\$510.2
Value added	\$397.8	\$202.7	\$178.9	\$779.5
Federal taxes				\$50.9
State and local taxes				\$111.7
Refined RPA				
Employment (job-years)	6,427	2,558	2,748	11,732
Labor income	\$325.8	\$133.4	\$106.5	\$565.7
Value added	\$439.2	\$223.5	\$198.4	\$861.0
Federal taxes (both Alternatives)				\$56.2
State and local taxes (both Alternatives)				\$123.6

Notes: All dollar amounts are expressed in millions of 2017 dollars. Employment impacts should not be interpreted as full-time equivalent (FTE) as they reflect the mix of full- and part-time jobs that is typical for each sector of the economy. Totals may not add due to rounding.

The economic impact results for the immediate study area (Richland County and Lexington County) are very similar. For instance, only 46 and 47 fewer jobs are expected to be generated for the RPA and the Refined RPA,

Assuming that capital expenses are evenly spent over the period of analysis, more than 1,222 jobs would be sustained in Richland County and Lexington County from 2017 to 2024 as a result of the project.

respectfully, but the labor income impact and value added impact are slightly higher – which implies that, on average, jobs are slightly better paid in the immediate study area than the state as a whole. In other words, the multiplier effects are of the same magnitude at the state and local levels. This can be explained by the fact that Richland County and Lexington County are two of the most populous counties in the state and are located in an urban area with a well-diversified economy.

Assuming that capital expenses are evenly spent over the period of analysis, more than 1,222 jobs and 1,334 jobs (for the RPA and the Refined RPA) would be sustained in Richland County and Lexington County from 2017 to 2024 as a result of the project. This represents 0.32 percent of the area’s current total employment.

3. Existing Conditions and Environmental Consequences

A summary of economic impacts for Richland County and Lexington County is provided in Table 3.3-29 below.

Table 3.3-29 Summary of Cumulative Economic Impacts – Richland Co. and Lexington Co. (2017 – 2024)

Impact Metric	Direct	Indirect	Induced	Total
RPA				
Employment (job-years)	5,750	2,250	2,583	10,583
Labor income	\$299.8	\$120.0	\$103.0	\$522.7
Value added	\$407.3	\$209.9	\$193.8	\$811.0
Federal taxes				\$53.0
State and local taxes				\$110.9
Refined RPA				
Employment (job-years)	6,329	2,494	2,862	11,685
Labor income	\$332.4	\$132.7	\$132.7	\$579.1
Value added	\$449.4	\$231.2	\$231.2	\$895.2
Federal taxes				\$58.5
State and local taxes				\$122.6

Notes: All dollar amounts are expressed in millions of 2017 dollars. Employment impacts should not be interpreted as full-time equivalent (FTE) as they reflect the mix of full- and part-time jobs that is typical for each sector of the economy. Totals may not add due to rounding.

A breakdown of economic impacts by major cost category (construction, engineering, and environmental services) shows that construction related expenses account for at least 85 percent of economic impacts (e.g., nearly 89 percent of total employment impact). Engineering related expenses are expected to generate 1,057 and 1,334 job-years for (or 10.1 and 11.4 percent of total employment impact) for the RPA and the Refined RPA respectively. Prorating the results to the respective capital expenses shows that the construction job multiplier is greater (by a factor of 1.4) than the engineering job multiplier. This is due, in part, to the fact that the construction sector is more labor intensive than the architectural and engineering sector.

The complete breakdown of impacts by major cost category is provided in Table 3.3-30.

3. Existing Conditions and Environmental Consequences

Table 3.3-30 Summary of Economic Impact Analysis results by Major Cost Category – South Carolina (2017 – 2024)

Impact Metric	Construction	Engineering	Environmental Services
RPA			
Employment (job-years)	9,451	1,074	58
Labor income	\$454.2	\$65.1	\$3.5
Value added	\$724.8	\$82.2	\$4.0
Federal taxes	\$47.9	\$4.9	\$0.2
State and local taxes	\$98.1	\$12.2	\$0.6
Refined RPA			
Employment (job-years)	10,337	1,334	61
Labor income	\$480.3	\$82.0	\$3.4
Value added	\$755.6	\$101.6	\$3.9
Federal taxes	\$49.8	\$6.1	\$0.2
State and local taxes	\$106.6	\$16.4	\$0.6

Notes: All dollar amounts are expressed in millions of 2017 dollars. Employment impacts should not be interpreted as full-time equivalent (FTE) as they reflect the mix of full- and part-time jobs that is typical for each sector of the economy. Totals may not add due to rounding.

With the RPA and the Refined RPA, providing improved mobility and reduced congestion could enhance economic opportunities for existing businesses and encourage new businesses to locate in any of the seven communities along the proposed project corridor.

3.3.5.10 Community Facilities and Services

Columbiana

Impacts to community facilities and services within the Columbiana community are not expected. Community facilities are listed and shown on Figure 3.3-3.

Seven Oaks

Impacts to community facilities and services within the Seven Oaks community are expected to be minimal.

Local police officers were asked about access impacts due to the relocation of access to Bush River Road from I-26; concerns were not expressed regarding the relocation of access at Bush River Road and I-26. The relocation of access from I-26 onto Bush River Road is not anticipated to impact EMS, police and fire response times.

The South Carolina Education Association building, located along Zimalcrest Drive is expected to be acquired with both the RPA and the Refined RPA. The relocation of this building would not have a significant impact on the Seven Oaks community as the market indicates that there are numerous comparable commercial properties available to meet the needs of the potential displacees. Community facilities within Seven Oaks are listed and shown on Figure 3.3-4.

3. Existing Conditions and Environmental Consequences

Saluda

Impacts to community facilities and services within the Saluda community are not expected; facilities are listed and shown on Figure 3.3-5.

Riverbanks

Local planners expressed concern and emphasized the importance of preserving the trail access and connectivity. Additional information about impacts to the greenway can be found in Chapter 3.11. Impacts to community facilities and services within the Riverbanks community are expected to be minimal. Community facilities are listed and shown on Figure 3.3-6.

Harbison

Impacts to community facilities and services within the Harbison community are expected to be minimal and are listed and shown on Figure 3.3-7.

St. Andrews

Impacts to community facilities and services within the St. Andrews community are expected to be minimal. The South Carolina Hospital Association building, located along Center Point Drive is expected to be acquired with both the RPA and the Refined RPA. The relocation of this building would not have a significant impact on the St. Andrews community as the market indicates that there are numerous comparable commercial properties available to meet the needs of the potential displacees. Community facilities are listed and shown on Figure 3.3-8.

Broad

Within the Broad community, the ITT Technical Institute along Browning Road is expected to be acquired with both the RPA and the Refined RPA. Impacts to other community facilities and services within the Broad community are expected to be minimal; community facilities are listed and shown on Figure 3.3-9.

3.3.5.11 Community Cohesion and Travel Patterns

Both the RPA and the Refined RPA would be located in an existing transportation corridor with right-of-way acquisition primarily at interchanges. The character of the neighborhoods and communities within the proposed project corridor is not expected to change as a result of the project, nor would the quality of life be adversely affected in the long-term. The proposed project would not create new physical barriers or divide existing neighborhoods, and negative impacts to community cohesion are not anticipated.

Due to the majority of travel pattern and access modifications that would occur at the interchange locations, the remainder of this section discusses changes in access, where applicable at individual interchange locations, and how any access change may impact surrounding communities and neighborhoods. Following that is a description of other potential effects to travel patterns within the communities.

I-26 / Broad River Road

The I-26 / Broad River Road interchange is located in the Columbiana and Harbison communities and is currently a partial cloverleaf interchange with directional loop off-ramps in the eastbound and westbound direction.

3. Existing Conditions and Environmental Consequences

Changes to the existing configuration of this interchange are not proposed as part of the RPA or the Refined RPA, therefore change in access is not anticipated.

I-26 / Lake Murray Boulevard

The I-26 / Lake Murray Boulevard interchange is located in the Columbiana and Harbison communities and is currently a partial cloverleaf interchange with directional loop off-ramps in the eastbound and westbound direction. Changes to the existing configuration of this interchange are not proposed as part of the RPA or the Refined RPA, therefore change in access is not anticipated.

I-26 / Harbison Boulevard

The I-26 / Harbison Boulevard interchange is located in the Columbiana and Harbison communities and is currently configured as a partial cloverleaf incorporating a westbound loop ramp off-ramp. The proposed interchange for the RPA and the Refined RPA is a diamond interchange that replaces the existing westbound loop off-ramp with a westbound off-ramp. The proposed interchange concept also shifts the westbound on-ramp to west of its existing location opposite Woodcross Drive, to opposite the proposed westbound off-ramp. Access would change slightly for traffic currently using the westbound loop off-ramp. The existing right turn movement from the loop off-ramp to the retail development located to the west on Harbison Boulevard would become a left turn movement on the proposed westbound off-ramp, and the existing left turn movement toward Broad River Road would become a right turn movement. Traffic to/from Woodcross Drive would no longer have direct access from the westbound off-ramp or to the westbound on-ramp. Access to surrounding businesses and residences at Woodcross Drive and Harbison Boulevard would be maintained.

For the RPA, southeast of this interchange, a new connection for Fernandina Road was proposed to connect to Woodcross Drive via existing Fernandina Court. This would shift access to Fernandina Road, from Woodcross Drive, approximately 600 feet southeast of its current location. Access to surrounding businesses and residences in this area would be maintained. The Refined RPA would not realign Fernandina Road using Fernandina Court to access Woodcross Drive due to the high hazard dam; Fernandina Road would remain in its current location, resulting in the avoidance of four non-residential relocations.

I-26 / Piney Grove Road

The I-26 / Piney Grove Road interchange is located in the Columbiana, Harbison, Seven Oaks and St. Andrews communities and is currently configured as a diamond interchange. Changes to the existing configuration are not proposed as part of the RPA or the Refined RPA. The RPA proposed improvements along Piney Grove Road, including the provision of a second left turn lane on westbound Piney Grove Road to facilitate traffic movements entering the eastbound on-ramp to I-26, that extended past the I-26 on and off ramp intersections with Piney Grove Road. In addition, the RPA required access control and right-of-way acquisition on the northeast side of the interchange, requiring the relocation of both the Spinx Gas Station and Waffle House. After the public hearing, control of access was fully evaluated at the Piney Grove Road interchange and it was determined that access control was not needed. The Refined RPA removed access control. This resulted in the avoiding the Spinx Gas Station and Waffle House relocations. Change in access for surrounding businesses and residences is not anticipated.

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Tram Road – Beatty Road (RPA)

Though not an interchange, the RPA proposed the construction of a bridge over I-26 to connect Tram Road to Beatty Road, between the I-26 / Piney Grove Road interchange and the I-26 / St. Andrews Boulevard interchange; this proposed bridge is located in the Seven Oaks and St. Andrews communities. This bridge would provide a new connection and access to the surrounding neighborhoods of Seven Oaks and St. Andrews communities. Access to Jamil Road from Tram Road would shift slightly south of its existing location and connect at Tram Road and Fredericksburg Way, near the entrance of the Whitehall neighborhood. Access to Beatty Road from Fernandina Road would shift slightly south of its existing location, impacting parking at an automotive dealer. The improved access at this location, by improving connectivity and mobility, could result in impacts to the surrounding community due to increased traffic in the area (refer to section 3.3.5.3). Due to public input during the DEIS public comment period and at the Public Hearing on August 23, 2018, the proposed Tram Road to Beatty Road connector bridge was removed as part of the Refined RPA (see Chapter 2 for additional detail).

I-26 / St. Andrews Road

The I-26 / St. Andrews Road interchange is located in the Seven Oaks and St. Andrews communities and is currently a partial cloverleaf. The existing westbound off-ramp providing access to eastbound St. Andrews Road also has a connection to Burning Tree Drive to facilitate the movement of off-ramp traffic to that road and to Fernandina Road. The proposed interchange configuration for the RPA and the Refined RPA is a Single Point Urban Interchange (SPUI). This SPUI maintains the connection from the westbound off-ramp to Burning Tree Drive, but eliminates the directional loop ramps. Westbound St. Andrews Road traffic that currently use the loop on-ramp to eastbound I-26 would now turn left onto an eastbound on-ramp that is joined by a ramp connection for eastbound St. Andrews Road traffic. Westbound I-26 traffic that uses the existing loop off-ramp to westbound St. Andrews Road would exit on the same off-ramp as traffic traveling to eastbound St. Andrews Road, and would turn left at the SPUI intersection. With the Refined RPA, control of access limits and guidelines were applied at the interchange, which resulted in the full access driveway to Motel 6 to be changed into a right-in/right-out only driveway. This, in conjunction with significant vertical differences between the surrounding roadways and the parking lot surfaces at the Motel 6, would likely result in significant impacts to the business. Therefore, it was determined that this property would be acquired.

I-26 / I-20

The I-26 / I-20 interchange is located in the Seven Oaks, St. Andrews and Broad communities and is currently a full cloverleaf. The RPA and the Refined RPA proposes a turbine interchange that would eliminate all loop ramps. Surrounding service roads, including Berryhill Drive, Burning Tree Drive, Browning Road and Frontage Road, would shift slightly to accommodate the new interchange configuration, but access to nearby businesses and residences in the surrounding areas would be maintained.

I-26 / Bush River Road

The I-26 / Bush River Road interchange is located in the Seven Oaks and Broad communities and is currently a partial cloverleaf with loop on-ramps to eastbound and westbound I-26. With the RPA and the Refined RPA, the existing ramps to/from Bush River Road are eliminated. This change in access would have impacts on

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surrounding businesses and residences along Bush River Road. Due to the redesign of the I-26/Bush River Road interchange, access to Bush River Road from I-26 would be relocated under the RPA and the Refined RPA; direct access to Bush River Road from I-26 would be affected. As such, direct access to commercial businesses at this location would experience less pass by traffic that currently exists today. These businesses would still be accessible via the new full access interchange at Colonial Life Boulevard and via the interchange at I-20 and Bush River Road; however, as the project purpose is to reduce traffic congestion along the corridors, there may be a potential indirect effect of reduced pass-by traffic to the business in general.

With the proposed improvements, individuals traveling along I-26 would access existing businesses and residences located at the existing I-26 / Bush River Road exit, by:

- (If traveling I-26 west) Exiting onto I-126 south toward Colonial Life Boulevard; exiting onto Colonial Life Boulevard and traveling approximately 0.75 miles on Colonial Life Boulevard north toward Bush River Road; turning left to travel west on Bush River Road for approximately 0.75 miles would provide access to existing businesses and residences.
- (If traveling I-26 west or I-26 east) Exiting onto I-20 west toward Bush River Road; taking the Bush River Road exit and turning left to go east on Bush River Road for approximately 0.75 miles would provide access to existing businesses and residences.
- (If traveling I-26 east) Exiting onto Colonial Life Boulevard and turning left onto Colonial Life Boulevard to travel north toward Bush River Road; turning left to travel west on Bush River Road for approximately 0.75 miles would provide access to existing businesses and residences.

I-20 / Bush River Road

The I-20 / Bush River Road interchange is located in the Seven Oaks community and is currently a partial cloverleaf. With the RPA and the Refined RPA, a diverging diamond interchange (DDI) is proposed. This DDI would require traffic turning right to use the directional loop on-ramp from eastbound Bush River Road to eastbound I-20 to turn left onto an on-ramp that also is used by right turning traffic from westbound Bush River Road. The proposed DDI places a western crossover intersection very close to the existing intersection of Berryhill Road. This would require modifying the Berryhill Road intersection from a full movement intersection to a right in/out intersection. Access to the businesses and residences surrounding the existing I-26 and Bush River Road is provided at this I-20 / Bush River Road interchange. The construction of a bridge over I-20, connecting Executive Center Drive and Rockland Road is proposed northeast of the I-20 / Bush River Road interchange; this new connection would provide additional access between the business park and businesses along Bush River Road, east of I-20. With the Refined RPA, the connection bridge between Berryhill and Rockland Road would be realigned to the west in order to provide better vertical and horizontal geometric alignment with Berryhill Road. Property impacts to businesses along Berryhill Road are reduced based on potential vertical restrictions along parking areas and internal business park driveways. Berryhill Road would also be revised to provide a cul-de-sac near the current intersection with Bush River Road. This cul-de-sac would be required based on geometric constraints with the proposed Bush River Road / I-20 interchange improvements, which would not permit access to Berryhill without significant property and relocation impacts. Traffic along Berryhill Road would access Bush River Road by way of the Berryhill and Rockland Road connector bridge and be redirected to a full-access intersection on the southeast side of the interchange at Rockland Road

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and Bush River Road. In addition to two gas stations, control of access would require acquisition of the former Black Pearl property on the northwest quadrant of the interchange.

I-20 / Broad River Road

The I-20 / Broad River Road interchange is located in the St. Andrews and Broad communities and is currently a diamond interchange. With the RPA and the Refined RPA, the interchange is modified to a SPUI. The SPUI does not change how traffic movements to and from I-20 to Broad River Road operate, but does focus them through a single signalized intersection located approximately in the middle of the bridge over I-20, rather than the current use of separate intersections for eastbound and westbound ramp traffic at the ends of the bridges. With the Refined RPA, control of access guidance was applied to the interchange design resulting in additional property relocations. Specifically, access to two gas stations in the southeast quadrant of the interchange, near the relocated Garner Drive, would be restricted prohibiting access to Broad River Road. Otherwise, access to nearby businesses and residences in the area would be maintained.

I-126 / Colonial Life Boulevard

The I-126 / Colonial Life Boulevard interchange is located in the Broad community and is currently a partial interchange providing an on-ramp for movements from Colonial Life Boulevard toward downtown Columbia along eastbound I-126. An off-ramp is currently provided for traffic traveling from downtown Columbia on westbound I-126. The proposed interchange for the RPA and the Refined RPA is a diamond interchange providing full access between I-126 and Colonial Life Boulevard.

Columbiana

According to local planners there is bicycle and pedestrian activity in the community; access to and safety of these facilities would be maintained with the proposed improvements. Sidewalk connections are proposed for the RPA and the Refined RPA at the I-26/Harbisson Boulevard and I-26/Piney Grove Road interchanges. The existing community roadway network would be maintained and roads would not be permanently closed or relocated with the RPA or the Refined RPA.

Seven Oaks

The proposed construction of a new bridge over I-26 to connect Tram Road and Beatty Road, for the RPA, would introduce a new local roadway connection between neighborhoods west of I-26, including Whitcott and Whitehall in the Seven Oaks community, and neighborhoods east of I-26, including Westshire and Homewood Terrace in the St. Andrews community. This adds additional local road connectivity within the corridor and would allow local trips in that area to use frontage road systems along both sides of the interstate between St. Andrews Road and Piney Grove Road. The Refined RPA does not include a new bridge over I-26 connecting Tram Road and Beatty Road.

Due to the reconfiguration of the I-26/Bush River Road interchange, access to Bush River Road from I-26 would be relocated under the RPA and the Refined RPA. Direct access to Bush River Road from I-26 would be affected.

As such, direct access to commercial businesses at this location could experience less pass by traffic than currently exists today. These businesses include gas stations, hotels, fast food restaurants, a Walmart and other

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highway retail. Refer to section 3.3.5.9 for information on potential economic impacts to these businesses. These businesses would still be accessible via the new full access interchange at Colonial Life Boulevard and at the interchange at I-20 and Bush River Road; however, as the project purpose is to reduce traffic congestion along the corridors, indirect effects to these businesses by reduced pass-by traffic are anticipated.

According to local planners there is bicycle and pedestrian activity in the community; access to and safety of these facilities would be maintained. Sidewalk connections are proposed for the RPA and the Refined RPA at the I-26/Piney Grove Road, the I-26/St. Andrews Road and the I-20/Bush River Road interchanges. Aside from the proposed modifications of the I-20/Bush River Road, as described above, the existing community roadway network would be maintained.

Saluda

Since the DEIS, adjustments to the interstate alignment and ramps between US 378 and I-26 along I-20 were updated to provide better access to and from the mainline interstate. The construction limits within the RPA right-of-way footprint along I-20 eastbound would be extended with the Refined RPA, to provide for additional lane tapers and additional acceleration and auxiliary lane lengths in order to meet current design guidance. Although it does extend the overall construction footprint, no additional right-of-way impacts would be associated with this revision. The Refined RPA also includes slight adjustments along the I-20 westbound alignment near the Broad River Road interchange to reduce impacts outside of the existing footprint. These minor shifts reduced actual property impacts but not with respect to relocations or access.

Residents in the CSA expressed concerns over access being maintained within the Saluda community, specifically access to the Lexington Medical Center, during construction. According to local planners there is bicycle and pedestrian activity in the community; access to and safety of these facilities would be maintained. The existing community roadway network would be maintained and permanent road closures or relocations are not expected within the Saluda community.

Riverbanks

As mentioned, the RPA and the Refined RPA would affect the Saluda Riverwalk Extension of the Three Rivers Greenway, located along the northern side of the Saluda River between I-126 and I-26; impacts would be similar for both Alternatives. The project would involve constructing a bridge over the trail; bridge pilings would not impact the trail. The long-term access and use of the trail would not be impacted by the project; however, construction would require the temporary closure of the trail for safety reasons. FHWA and SCDOT informed the City of Columbia, the local agency with jurisdiction over the Saluda Riverwalk Extension, of their intent to propose a *de minimis* finding for the temporary impact to the Saluda Riverwalk Extension. A copy of this letter detailing the basis for the *de minimis* finding and the City of Columbia's concurrence with this proposed finding is contained in Appendix P. In addition, a public notice regarding the finding of *de minimis* impact was published in The State newspaper. No comments were submitted. Refer to Chapter 3.11 for additional information.

Accessibility for the neighborhoods within the Riverbanks community and the existing community roadway network would be maintained. According to local planners there is bicycle and pedestrian activity in the community; access to and safety of these facilities would be maintained in the long-term. The existing

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community roadway network would be maintained and permanent road closures or relocations are not expected within the Riverbanks community.

Harbison

For the RPA, Fernandina Road, a service road east of I-26 and south of Harbison Boulevard, was proposed to be realigned using Fernandina Court, although access to surrounding businesses and neighborhoods would be maintained. Impacts to parking in this area is expected for the RPA. The Refined RPA would not realign Fernandina Road using Fernandina Court to access Woodcross Drive due to the high hazard dam. Instead, Fernandina Road would remain in its current location, resulting in the avoidance of four non-residential relocations. With the Refined RPA, Saturn Parkway has been shifted to avoid impacting a hotel, and Giles Parkway was removed due to it only providing access to one business. Although a non-residential relocation would be added with the Refined RPA, the removal of Giles Parkway resulted in avoiding the relocation of 20 apartment units and three businesses.

According to local planners there is bicycle and pedestrian activity in the community; access to and safety of these facilities would be maintained. Sidewalk connections are proposed for both alternatives at the I-26/Harbison Boulevard and the I-26/Piney Grove Road interchanges. The existing community roadway network would be maintained and permanent road closures or relocations are not expected within the Harbison community.

St. Andrews

With the RPA, the proposed construction of a new bridge over I-26 to connect Tram Road and Beatty Road would introduce a new local roadway connection between neighborhoods west of I-26, including Whitcott and Whitehall in the St. Andrews community, and neighborhoods east of I-26, including Westshire and Homewood Terrace in the St. Andrews community. This adds additional local road connectivity within the corridor and would allow local trips in that area to use frontage road systems along both sides of the interstate between St. Andrews Road and Piney Grove Road. The Refined RPA does not propose a new bridge over I-26 connecting Tram Road and Beatty Road but does include a realignment of Berryhill Road.

According to local planners there is bicycle and pedestrian activity in the community; and access to and safety of these facilities would be maintained. Sidewalk connections are proposed for both alternatives at the I-26/Piney Grove Road, I-26/St. Andrews Road and the I-20/Broad River Road interchanges. The existing community roadway network would be maintained and permanent road closures or relocations are not expected with either of the alternative.

Broad

Due to the relocation of the I-26/Bush River Road interchange, access to Bush River Road from I-26 would be relocated by both the RPA and the Refined RPA. Direct access to Bush River Road from I-26 would be affected. With the proposed improvements, individuals traveling along I-26 would access existing businesses and residences, located at the existing I-26 / Bush River Road exit, by:

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- (If traveling I-26 west) Exiting onto I-126 south toward Colonial Life Boulevard; exiting onto Colonial Life Boulevard and traveling approximately 0.75 miles on Colonial Life Boulevard north toward Bush River Road; turning left to travel west on Bush River Road for approximately 0.75 miles would provide access to existing businesses and residences.
- (If traveling I-26 west or I-26 east) Exiting onto I-20 west toward Bush River Road; taking the Bush River Road exit and turning left to go east on Bush River Road for approximately 0.75 miles would provide access to existing businesses and residences.
- (If traveling I-26 east) Exiting onto Colonial Life Boulevard and turning left onto Colonial Life Boulevard to travel north toward Bush River Road; turning left to travel west on Bush River Road for approximately 0.75 miles would provide access to existing businesses and residences.

As such, direct access to commercial businesses at this location would experience less pass by traffic than currently exists today. These businesses include gas stations, hotels, fast food restaurants, a Walmart and other highway retail. These businesses would still be accessible via the interchange at I-20 and Bush River Road; however, as the project purpose is to reduce traffic congestion along the corridors, indirect effects to these businesses by reduced pass-by traffic are anticipated. Refer to Chapter 3.15 for additional information on indirect and cumulative impacts.

With the Refined RPA, the connection bridge between Berryhill and Rockland Road would be realigned to the west in order to provide better vertical and horizontal geometric alignment with Berryhill Road. Property impacts to businesses along Berryhill Road are reduced based on potential vertical restrictions along parking areas and internal business park driveways. Berryhill Road would also be revised to provide a cul-de-sac near the current intersection with Bush River Road. This cul-de-sac would be required based on geometric constraints with the proposed Bush River Road / I-20 interchange improvements, which would not permit access to Berryhill without significant property and relocation impacts. Traffic along Berryhill Road would access Bush River Road by way of the Berryhill and Rockland Road connector bridge and be redirected to a full-access intersection on the southeast side of the interchange at Rockland Road and Bush River Road.

According to local planners there is bicycle and pedestrian activity in the community; access to and safety of these facilities would be maintained. Sidewalk connections are proposed for both alternatives at the I-20/Broad River Road, I-26/Bush River Road and the I-126/Colonial Life Boulevard interchanges.

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3.3.5.12 Environmental Justice and Special Populations

A community-level analysis of impacts was conducted to identify the location of potential adverse effects associated with the alternatives and to determine if impacts were disproportionate among EJ populations in the CSA. Issues that were considered when evaluating the potential for EJ impacts include acquisitions, effects on cohesion of communities and neighborhoods, visual/aesthetic impacts, noise impacts, access, mobility and safety impacts.

The No-Build alternative is expected to have minor effects on EJ populations. However, EJ populations would not receive the benefits of the proposed interstate and interchange improvements if the project is not constructed.

Under the RPA and the Refined RPA, as previously discussed in this chapter, there would be minor impacts. Both alternatives would improve local mobility and reduce traffic congestion for all communities, including low-income and minority populations. Overall, the potential impacts would be minimal compared with the proposed project's benefits, which would include improvements to mobility, safety in the corridor and system linkages as well as reduced traffic congestion. EJ populations would share in the potential benefits of the proposed project as there would be reduced traffic congestion and improved mobility along the interstates.

Community impacts are anticipated with the proposed improvements for the RPA and the Refined RPA; however, the impacts are expected to affect all populations similarly, and impacts from the RPA and the Refined RPA are comparable. However, the Refined RPA would include less residential relocations within EJ Block Groups than the RPA; see below.

- The RPA is expected to result in the relocation of 110 residential units total; of these 110 units, 97 are located in EJ Block Groups while 13 are located in non-EJ Block Groups. For non-residential properties, the relocation of 40 properties total (including 1,106 tenants/units, 1,050 of those units being storage units which are considered personal property relocations) is expected; of these 40 properties, 27 are located in EJ Block Groups while 9 are located in non-EJ Block Groups
- The Refined RPA is expected to result in the relocation of 95 residential units total; of these 95 units, all are located in EJ Block Groups. For non-residential properties, the relocation of 65 properties total (including 1,129 tenants/units; 1,050 of those units being storage units which are considered personal property relocations) is expected; of these 65 properties, 63 are located in EJ Block Groups.

The development of the Alternatives focused on avoiding, minimizing and mitigating the effects on the entire population as well as making every effort to ensure varied input was considered in the decision making process.

Impacts to minority and low-income populations are not considered to be disproportionately high and adverse. Benefits resulting from the proposed project are expected to be equitably distributed throughout the communities.

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The RPA and Refined RPA relocations include 1,050 storage units that are considered personal property relocations. At this time, it is unknown how many units are owned by low income and/or minorities.

The St. Andrews, Broad and Seven Oaks communities would appear to incur the greatest overall property impacts, for residential and non-residential acquisitions, from the proposed RAs within EJ Block Groups; and, these communities also have the higher concentrations of low-income and minority populations. The CSA is majority minority (at 50.4 percent of the population) and potential project impacts and benefits appear to be distributed equitably among the general population within the study area and therefore not disproportionate among the EJ populations in the CSA.

However, impacts within EJ Block Groups are to be expected within these communities due to the high number of EJ Block Groups located in these communities. Although residential and non-residential acquisitions are higher within EJ Block Groups, it is not confirmed that the business or property owner is minority or low-income. However, due to the known EJ populations within the community study area, public outreach to special populations was customized to specifically target EJ communities, please refer to chapter 4 for additional information on public outreach.

Columbiana

Within the Columbiana community, the proposed improvements for the RPA are expected to result in the relocation of two residential multi-family buildings, housing 20 apartment units, within the Country Walk Apartments along Saturn Parkway, south of I-26. These properties are located in a Block Group that is categorized as an EJ Block Group; however, it is not confirmed that the resident or owner is a minority or low-income person. The Refined RPA would not relocate residential properties located in EJ Block Groups. Of the anticipated non-residential relocations within Columbiana, all are located within EJ Block Groups for the RPA and the Refined RPA. Partial non-residential property acquisitions within Columbiana are located within EJ Block Groups for the RPA and the Refined RPA.

Seven Oaks

Within the Seven Oaks community, the proposed improvements for the RPA are expected to result in the relocation of 10 residential properties, which include two single-family residences and eight multi-family buildings, containing 70 apartment units; all are located within an EJ Block Group. The Refined RPA is expected to result in the relocation of 76 residential units, including 74 apartment units, all of which are located in a Block Group that is categorized as an EJ area; however, it is not confirmed that the residents or owners are minority or low-income. Of the anticipated 11 and 22 non-residential tenant relocations within Seven Oaks, for the RPA and the Refined RPA, all but two relocations are located within EJ Block Groups, respectively. Partial non-residential property acquisitions within Seven Oaks are located within EJ Block Groups for the RPA and the Refined RPA.

Also within the Seven Oaks community, there are commercial uses concentrated near the I-26/Bush River Road interchange. Direct access to commercial businesses at this location could experience less pass by traffic than currently exists today. These businesses include gas stations, hotels, fast food restaurants, a Walmart and other highway retail all of which are located in a Block Group that is categorized as an EJ area. However, it has not confirmed that the business owners are minority or low-income. These businesses would still be accessible via

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the new full access interchange at Colonial Life Boulevard and at the interchange at I-20 and Bush River Road; however, as the project purpose is to reduce traffic congestion along the corridors, indirect effects to these businesses by reduced pass-by traffic are anticipated. Refer to Chapter 3.15 for additional information on indirect and cumulative impacts.

Saluda

Residential relocations are not anticipated within the Saluda community with the RPA and the Refined RPA. No relocations of non-residential properties are anticipated within Saluda. Partial non-residential property acquisitions within Saluda are located within EJ Block Groups for the RPA and the Refined RPA.

Riverbanks

Residential relocations or acquisitions are not anticipated within the Riverbanks community with the RPA and the Refined RPA. Relocations or acquisitions of non-residential properties are not anticipated within Saluda for the RPA or the Refined RPA.

Harbison

The proposed improvements for the RPA and the Refined RPA are not expected to result in the relocation or partial acquisition of any residential properties within an EJ Block Group within the Harbison community. Of the anticipated non-residential property acquisitions within Harbison, all are located within an EJ Block Group for the RPA and the Refined RPA. Partial non-residential property acquisitions within Harbison are located within EJ Block Groups for the RPA and the Refined RPA.

St. Andrews

The proposed improvements for the RPA and the Refined RPA are expected to result in the relocation of four residential properties, all of which are located in Block Groups that are categorized as EJ Block Groups; however, it is not confirmed that the residents or owners are minority or low-income. The RPA and the Refined RPA are expected to result in 17 and 11 non-residential relocations, respectfully. All non-residential relocations occur within EJ Block Groups. Partial non-residential property acquisitions within St. Andrews are located within EJ Block Groups for the RPA and the Refined RPA.

Broad

The proposed improvements for the RPA and the Refined RPA are expected to result in the relocation of 14 and 15 residential properties, respectfully. Of the total residential properties to be relocated, all are located within an EJ Block Group with each alternative; however, it is not confirmed that the resident or owner is minority or low-income. All anticipated relocations of non-residential properties within the Broad community are located within an EJ Block Group. Partial non-residential property acquisitions within Broad are located within EJ Block Groups for the RPA and the Refined RPA.

Also within the Broad community, there are commercial uses concentrated near the I-26/Bush River Road interchange. Direct access to commercial businesses at this location would experience less pass by traffic than currently exists today. These businesses include limited-service restaurants, convenience stores, and gas stations all of which are located in a Block Group that is categorized as an EJ area. Data gathered from ReferenceUSA

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indicates that some of these businesses are minority-owned, but the data is incomplete as not all businesses provide this information (Table 3.3-31).

Table 3.3-31 Business owner Ethnicity, I-26/Bush River Road Interchange

Company Name	Address	Primary NAICS Description	Executive Ethnicity
Captain D's Seafood	656 Bush River Rd	Limited-Service Restaurants	Not available
City Fuel Food	1301 Bush River Rd	Convenience Stores	Far Eastern
Cook Out	600 Bush River Rd	Limited-Service Restaurants	Not available
Express Zone Citgo	830 Bush River Rd	Other Gasoline Stations	Not available
Foodmart Sunoco	1203 Bush River Rd	Other Gasoline Stations	Not available
Murphy USA	1330 Bush River Rd	Convenience Stores	Western Europe
Noisy Wings	1501 Bush River Rd	Limited-Service Restaurants	Not available
Schlotzsky's Deli	529 Bush River Rd	Limited-Service Restaurants	South Asian
Subway	800 Bush River Rd	Limited-Service Restaurants	Not available
Wing Street	1320 Bush River Rd # C4	Limited-Service Restaurants	Western Europe

These businesses would still be accessible via the new full access interchange at Colonial Life Boulevard and at the interchange at I-20 and Bush River Road. Impacts to businesses with minority ownership are not expected to be disproportionate.

Offsetting Benefits of the RPA and the Refined RPA

While all impacts of the project would occur in EJ areas as well as non-EJ areas, the EJ populations would share in the potential benefits of implementing a transportation solution that improves mobility and enhances traffic operations by reducing existing traffic congestion within the project corridor. Other potential benefits of the build alternative, including those mentioned by local planners, include the following:

- Employment opportunities due to construction and the potential redevelopment/development opportunities in the areas surrounding the interchanges, which would result in positive economic gains in the form of increased wages and spending,
- Improved mobility through the project vicinity in the area of the interchanges,
- Improved user experiences relating to personal, emotional and mental health due to shorter travel times and ease of navigation;
- Improved safety for pedestrians around interchanges;
- Improved safety for motorists along the corridor and at interchanges;
- Enhanced access and connectivity along the corridor, and
- Reduced travel time within the corridor.

3.3.5.13 Summary of Community Impacts

The community analysis determined that there would be impacts associated with the proposed project; however, these impacts are expected to be minimal. Based on an analysis of Block Groups within the study area, other communities within the project study area contain similar and greater EJ population percentages. The

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Seven Oaks community has 11 block groups and 8 (73%) of them are classified as EJ. Comparatively, St. Andrews has 11 BGs and all (100%) are classified as EJ; Broad has 7 BGs and 5 (71%) are classified as EJ. Therefore, the conclusion that the impacts to EJ communities is not disproportionate is accurate based on the analysis. The overall project would not result in changes in the neighborhood or community cohesion, or community facilities such as schools, churches, or recreation areas. Some travel pattern changes would be included as part of the project, but those changes would result in improved access and mobility within the project area for all. Overall, the project would not disproportionately impact any social group.

Short-term community impacts could include temporary lane closures, temporary detours, and controlled access but appropriate public notification and traffic controls would be used to minimize impacts to local residents. Long-term impacts could include re-configuration of property access and local roadway connections, property acquisition, and changes in viewscape. However, the project would provide a benefit to local residents through improved mobility and access to goods and services within the project area.

Finally, the acquisition and relocation process would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (P.L. 91-646, as amended by 100-17; 49 CFR 24.205 (AF)). Appendix I details the Relocation Study conducted for this project.

3.3.6 HOW WOULD COMMUNITY AND ECONOMIC IMPACTS BE MITIGATED?

3.3.6.1 No-Build Alternative

Under the No-Build Alternative, project-related mitigation would not be warranted.

3.3.6.2 The RPA and the Refined RPA

The following mitigation measures would address direct and indirect impacts from the RPA and the Refined RPA that may affect communities:

- The acquisition and relocation process would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (P.L. 91-646, as amended by 100-17; 49 CFR 24.205 (AF)). Appendix I details the Relocation Study conducted for this project.
- Noise mitigation is addressed in Chapter 3.5 and in Appendix J.
- Because the Department of Justice's Safe Harbor threshold for LEP is exceeded for Spanish-speaking populations within the study area, written translations of vital documents would be provided for Spanish language-speaking populations, as well as other measures determined by SCDOT to ensure meaningful access to project information.
- SCDOT would coordinate with local jurisdictions to evaluate the inclusion of bicycle/pedestrian facilities in the project, and to evaluate the need for bicycle/pedestrian access accommodation during construction.
- SCDOT would continue coordinating with local EMS services, Local Fire Departments, the SC Highway Patrol, and school districts to minimize effects during and after construction.
- A signing plan would be prepared that meets the requirements and guidelines of the 2009 Manual on Uniform Traffic Control Devices (MUTCD). Each interchange would be evaluated to provide appropriate

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exit and advance guide signing. Typical signing layouts would include standard exit signing, exit-only signing where needed, and arrow-per-lane signs.

The RPA and the Revised RPA are consistent with regional and local land use plans. Coordination efforts by SCDOT with local officials is ongoing during the planning process. However, the responsibility for land use planning lies with the local jurisdictions. Additionally, the alternatives would not cause a negative impact to the economic output, jobs creation, or income. Therefore, mitigation measures are not warranted.

3.3.6.3 Environmental Justice/LEP outreach strategies

Outreach to special populations was customized to specifically target EJ and LEP communities. Outreach approaches to these communities are listed below and would continue through the duration of the project, as-needed. The project is not anticipated to contribute to any highly disproportionate or adverse effects to EJ or LEP communities; however, these outreach strategies would provide these communities opportunities for engagement and input into the project and the transportation decision-making process. Additional information on public outreach is included in Chapter 4 and in Appendix O.

- Seeking out, building and maintaining a comprehensive database of mail and e-mail contact information for EJ groups and advocacy groups;
- Partnering with senior, disability, social service, transit, and area Hispanic liaison offices to provide information regarding the project. Offices include Hispanic Connections and the South Carolina Commission for Minority Affairs;
- Advertising meetings in high activity centers along the project corridor using fliers and static displays. Centers include Richland County Recreation facilities and City of Columbia Parks and Recreations facilities; churches; gas stations and grocery stores.
- Publishing newspaper ads and press releases in Spanish for Hispanic publications;
- Providing interpreters throughout the acquisition process;
- Translating other project materials to Spanish, as needed;
- Providing Spanish translators free of charge at public meetings;
- Engaging audiences through greater use of visuals, larger font and simpler language in fliers, display boards, and presentations;
- Translating features on the project website to Spanish; and,
- Coordinating information distribution to focused communities based on GIS mapping and socioeconomic and demographic information such as EJ insight.
 - Partnering with local places of worship
 - Providing project information to area grocery stores and gas stations.

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