



### 3.3 ENVIRONMENTAL JUSTICE

#### 3.3.1 What is Environmental Justice?

*Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires that each Federal agency shall, to the greatest extent by law, administer and implement its programs, policies, and activities that affect human health or the environment to identify and avoid “disproportionately high and adverse” effects on minority and low-income populations. The following are FHWA definitions of minority and low-income populations:<sup>40</sup>

“A minority means a person who is:

- (1) Black (having origins in any of the black racial groups of Africa);
- (2) Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
- (3) Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
- (4) American Indian or Alaskan Native (having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).”

“Minority population means any readily identifiable groups or minority persons who live in a geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy or activity.”

“Low-Income means a household income at or below the Department of Health and Human Services poverty guidelines.”

“Low-Income population means any readily identifiable group of low-income persons who live in a geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy or activity.”

#### Disproportionate Impact

Disproportionate is defined in two ways:

- ◆ The impact predominately impacts a minority or low-income population group or,
- ◆ The impact is “more severe” than that experienced by non-minority or non-low income populations.

<sup>40</sup> FHWA, Order 6640.23, *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (December 2, 1998).



There are three fundamental principles of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

### 3.3.2 How were minority and low-income populations identified in the Community Impact Assessment study area?

To identify minority and low-income populations, information from the 2000 U.S. Census was collected for each block group within the CIA study area, which extends from I-95 southeast to S.C. Route 22, and is bordered by the Great Pee Dee River floodplain to the southwest and the North Carolina border to the northeast (refer to Figure 3-25). Delineated by the U.S. Census Bureau, a block group is the smallest geographic unit for which demographic data are readily available. Demographic data are the physical characteristics of a population such as age, sex, race, marital status, family size, education, geographic location, and occupation. The information collected for each block group included the total population, total minority population, and total population living below the poverty level. From this data, the percentage of persons classified as minority and the percentage of persons below the poverty level were calculated. For the purposes of identifying low-income populations in the CIA study area, the U.S. Department of Health and Human Services poverty thresholds were used (refer to Table 3.16).

#### CIA Study Area

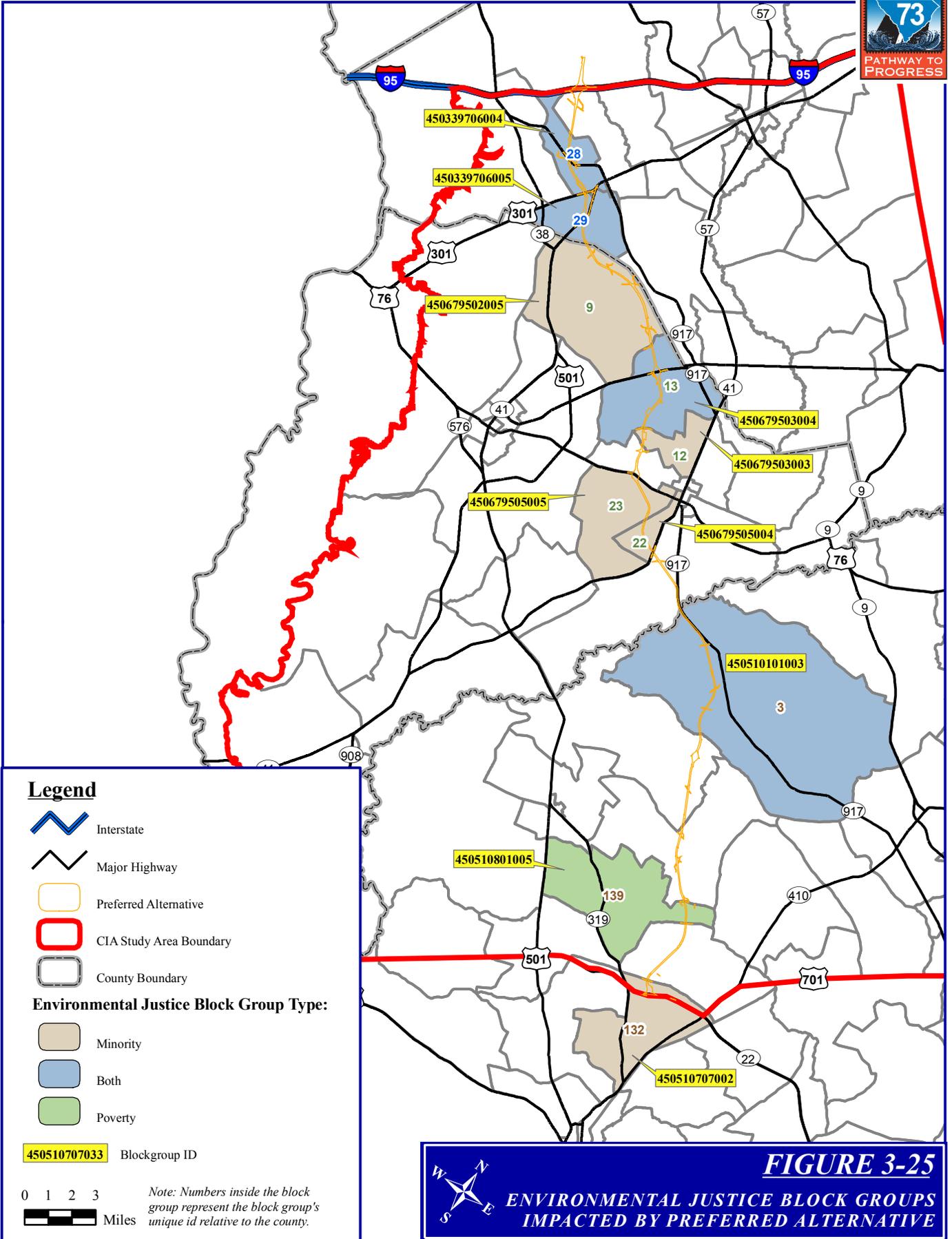
The CIA study area includes potentially impacted communities between I-95 and S.C. Route 22, where new construction could occur (refer to Figure 3-25).

**Table 3.16**  
**2000 Department of Health and Human Services Poverty Thresholds**

#### Interstate 73 FEIS: I-95 to the Myrtle Beach Region

Size of Family Unit	Weighted Average Thresholds
1	\$ 8,794
2	\$ 11,239
3	\$ 13,738
4	\$ 17,603
5	\$ 20,819
6	\$ 23,258
7	\$ 26,754
8	\$ 29,701
9	\$ 35,060

Once the baseline minority and low-income populations were identified, the block group data was compared to the populations within the state, county, and the area of each county within the CIA study area. Executive Order 12898 states that the appropriate unit of analysis for environmental justice may be “a governing body’s jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as not to artificially dilute or inflate the affected minority population.” Since the characteristics of the three





counties vary, the percentage of minority and low-income populations within the CIA study area in each individual county was used as a threshold for determining if a block group contained high concentrations of environmental justice populations. The CIA study area was chosen as the unit of analysis so as not to artificially dilute or inflate the affected populations, as stated in Executive Order 12898.

Efforts were made to include low-income and minority populations located within the CIA study area in the project development process. The public involvement efforts are described more fully in Chapter 4, but include:

- Public information meetings in each county;
- Stakeholder meetings, including National Association for the Advancement of Colored People (NAACP) representatives;
- Coordination with local ministers and conducting church meetings;
- Door-to-door surveys within low-income and minority communities to ensure input; and,
- Public hearings in each county.

### 3.3.3 Are there any minority populations in the CIA study area?

There are a total of 87 block groups within the CIA study area, including 30 block groups in Dillon County, 25 block groups in Horry County, and 32 block groups in Marion County.

Within the CIA study area in Dillon County, 52 percent of the population is minority. In Horry County, within the CIA study area, 26 percent the population is minority. In Marion County, within the CIA study area, 60 percent of the population is minority. Figure 3-25 (refer to page 3-88) identifies these block groups for each county. In total, 43 block groups in the CIA study area (14 in Dillon, 11 in Horry, and 18 in Marion) that have minority populations at or above the percentages of their respective counties. The total minority population in the CIA study area in 2000 was estimated at approximately 45 percent. This percentage is 10 percent higher than South Carolina (35 percent) and 20 percent higher than the U.S. (25 percent, refer to Table 3.17).

	<b>Total Population</b>	<b>Total Minority Population</b>	<b>Percent Minority Population</b>
<b>South Carolina</b>	4,012,012	1,411,528	35%
<b>CIA Study Area</b>	200,865	89,600	45%
<b>Dillon County</b>	30,722	15,780	51%
<b>Dillon County CIA Study Area</b>	30,214	15,634	52%
<b>Horry County</b>	196,629	42,323	22%
<b>Horry County CIA Study Area</b>	19,155	5,009	26%
<b>Marion County</b>	35,466	21,313	60%
<b>Marion County CIA Study Area</b>	32,892	19,759	60%

Source: U.S. Census Bureau, 2000



### 3.3.4 Are there any low-income populations in the CIA study area?

In the Dillon County portion of the CIA study area, 24 percent of the population is low-income. Twenty-three percent of the population in the CIA study area portion of Marion County is considered to be low-income. In Horry County, 18 percent of the population within the CIA study area is low-income. Figure 3-25 (refer to page 3-88) identifies the low-income blocks for each county.

In total, 39 block groups represent areas of low-income populations within the CIA study area (13 in Dillon, 11 in Horry, and 15 in Marion). The total percentage of people in the CIA study area classified as living at or below the poverty level in 2000 was approximately 22 percent. This rate is eight percent higher than South Carolina as a whole (refer to Table 3.18).

	<b>Total Population</b>	<b>Total Low-income</b>	<b>Percent Low-income</b>
<b>South Carolina</b>	4,012,012	547,869	14%
<b>CIA Study Area</b>	200,865	38,368	22%
<b>Dillon County</b>	30,722	7,311	24%
<b>Dillon County CIA Study Area</b>	30,214	7,225	24%
<b>Horry County</b>	196,629	23,356	12%
<b>Horry County CIA Study Area</b>	19,155	3,432	18%
<b>Marion County</b>	35,466	8,117	23%
<b>Marion County CIA Study Area</b>	32,892	7,587	23%

Source: U.S. Census Bureau, 2000

According to the FHWA definitions, there are minority and/or low-income populations that reside within the CIA study area. In total, 43 block groups represent areas of minority population and 39 block groups represent areas where the population is living below the poverty level in the CIA study area (refer to Table 3.19). In the total CIA study area, there are 26 block groups that meet both the minority and the low-income thresholds, 10 in Dillon County, seven in Horry County, and nine in Marion County.

	<b>Total Block Groups</b>	<b>Low-Income Block Groups</b>	<b>Minority Block Groups</b>
<b>Dillon County</b>	30	13	14
<b>Horry County</b>	25	11	11
<b>Marion County</b>	32	15	18
<b>CIA Study Area</b>	87	39	43

Source: U.S. Census Bureau, 2000



### **3.3.5 How were potential environmental justice impacts evaluated?**

Executive Order 12898 requires that the Preferred Alternative be reviewed to determine if there are disproportionately high or adverse effects on minority or low-income populations. The goal is to achieve a fair distribution of benefits and burdens to all communities impacted by the Preferred Alternative, while giving the populations within the CIA study area access to the transportation decision-making process.

Areas with concentrations of environmental justice populations above the averages of the county and CIA study area were identified during project development. The Preferred Alternative was shifted and modified to avoid or minimize these communities, including low-income and minority areas. However, it was impossible to avoid all low-income and minority block groups, since environmental justice populations are widely spread throughout the counties and compose 64 percent of all of the block groups within the CIA study area.

A block group analysis was conducted to identify the number of minority and low-income areas that would be impacted by the Preferred Alternative. The Preferred Alternative was then examined to determine whether disproportionate patterns or concentrations of adverse effects would occur in areas with environmental justice populations when compared to impacts that would occur in other areas of the project study area.

### **3.3.6 Are there any minority and low-income populations impacted by the Preferred Alternative?**

The Preferred Alternative would pass through 19 block groups within the CIA study area, 12 of which meet or exceed the established national thresholds to qualify as low-income and/or minority. Of the 12 block groups, two are located in Dillon County, six in Marion County, and four in Horry County. Nine block groups of the 12 have a minority population over their respective thresholds, including two in Dillon County, five in Marion County, and two in Horry County (refer to Table 3.20, page 3-92). Six block groups out of 12 have low-income populations over their respective thresholds, two are located in Dillon County, two are within Horry County, and two are in Marion County (refer to Table 3.20, page 3-92).

Sixty-four percent of all block groups within the CIA study area have low-income or minority populations that meet environmental justice thresholds. Of the 19 block groups impacted by the Preferred Alternative, 63 percent are composed of low-income or minority populations that meet environmental justice thresholds. Therefore, the percentage of environmental justice populations impacted by the Preferred Alternative would not be disproportionate when compared to the CIA study area as a whole.

### **3.3.7 What other methods were used to consider Environmental Justice populations in the CIA study area?**

Due to the rural nature of the area, block groups are very large and development within the block groups can be sparse. The Preferred Alternative could pass through block groups that are considered to contain environmental justice populations, but not impact these populations or communities. It also became evident, based on field observations, community impact studies, survey data, and block level census data, that



**Table 3.20  
Block Groups Impacted by the Preferred Alternative  
Interstate 73 FEIS: I-95 to the Myrtle Beach Region**

	<b>% Minority</b>	<b>% Poverty</b>	<b>Preferred Alternative</b>
<b>Dillon County</b>	<b>52%</b>	<b>24%</b>	
Block Group 706001	37%	19%	x
Block Group 706003	19%	16%	x
Block Group 706004	80%	33%	X
Block Group 706005	65%	30%	X
Block Group 706006	19%	11%	x
<b>Horry County</b>	<b>26%</b>	<b>18%</b>	
Block Group 101003	35%	20%	X
Block Group 707001	11%	18%	X
Block Group 707002	27%	6%	X
Block Group 801001	9%	14%	x
Block Group 801002	11%	7%	x
Block Group 801005	14%	19%	X
<b>Marion County</b>	<b>60%</b>	<b>23%</b>	
Block Group 502005	67%	22%	X
Block Group 503002	56%	23%	X
Block Group 503003	65%	16%	X
Block Group 503004	63%	27%	X
Block Group 505002	42%	11%	x
Block Group 505003	12%	14%	x
Block Group 505004	63%	18%	X
Block Group 505005	73%	21%	X
Total number of block groups impacted by the Preferred Alternative			19
Total number of block groups that are minority/low-income that are impacted by the Preferred Alternative			12
% block groups per the Preferred Alternative that are EJ			63%
*Grayed Text indicates an area that qualifies as an EJ area.			

some communities that fell within low-income or minority block groups were not actually environmental justice populations. Additionally, communities were identified that have concentrations of low-income and minority populations, but did not fall within low income and/or minority block groups. For this reason, a community-based study of impacts was completed to identify the location of potential adverse effects associated with the Preferred Alternative. Issues that were considered when evaluating the potential for environmental justice impacts included relocations, effects on community cohesion, economic impacts, access and mobility issues, noise impacts, change of visual character, and impacts to parks and community facilities.

In general, comments and surveys received from environmental justice communities within Dillon and Marion Counties expressed support for the proposed project being built in their communities, in hopes that it would bring economic development. Horry County respondents were consistently opposed to the proposed project. This played an important part in establishing whether effects on the communities of concern were positive or negative, as well as determining the magnitude of the potential impacts.



### 3.3.7.1 Residential and Business Relocations

Based on follow-up studies conducted during development of the FEIS, areas with known concentrations of environmental justice populations were identified. Concerted efforts were made to shift the Preferred Alternative to avoid known environmental justice areas and/or minimize relocations and direct impacts to communities with environmental justice populations. Examples of areas where modifications were made to the Preferred Alternative to minimize impacts include the following:

- The Preferred Alternative was shifted to travel along the edge of the Zion community to avoid impacting the Zion Grocery, which serves as an important community store and meeting place. An interchange at S.C. Route 41A would be located west of the community center, and the right-of-way limits for the interchange would have potentially impacted the Zion Grocery. However, design considerations will be incorporated into the final interchange design to ensure this important local landmark is not impacted.
- The shift in the Preferred Alternative was made to avoid impacting the Signode Plant, which is one of the top employers in the area. During the Public Hearing comment period, Signode stated that if it were impacted, it might relocate out of the project study area, which would reduce employment opportunities for local residents. The new alignment avoided the facility and reduced impacts to an environmental justice community northeast of Signode.
- The frontage roads connecting U.S. Route 501 with U.S. Route 301 in the vicinity of the U.S. Route 501 interchange were designed to remain within the right-of-way limits of existing roads, which minimized impacts and relocations to environmental justice populations in the area.

Although efforts were made to minimize impacts to areas with environmental justice populations, some impacts may still occur in these communities.

For the purpose of the environmental justice community-based study, relocations that fell within both environmental justice block groups and community boundaries, as defined by the community surveys (refer to Communities Section 3.2, page 3-23, and Figure 3-4, page 3-26), were included in Table 3.21 (refer to page 3-94). Total environmental justice relocations were tallied for the Preferred Alternative. However, due of the size of the block groups and rural nature of the CIA study area, this did not definitively show whether or not individual relocations are in fact low-income and/or minority impacts.

A conceptual relocation study was prepared for the Preferred Alternative to ensure replacement housing is available in each county. Based on field studies and observations, there appears to be either housing and/or land available for those displaced to relocate within the affected communities. As discussed previously, the relocation program will be conducted in accordance with the *Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended (Public



Table 3.21 Environmental Justice Block Groups and Community Relocations Interstate 73 FEIS: I-95 to the Myrtle Beach Region		
Block Group	Community	Residential and Business Relocations
<b>Dillon County</b>		
Block Group 706004	Latta	4 Residences, 1 Business (D&J Convenience Store)
Block Group 706005	Latta	1 Business (Penske Truck Leasing)
<b>Horry County</b>		
Block Group 801005	Cool Spring	2 Residences
<b>Marion County</b>		
Block Group 503002	Mullins	11 Residences, 1 Business (S&H Quick Stop)
Block Group 503003	Mullins	2 Residences
Block Group 502005	Zion	1 Residence
Block Group 503004	Zion	9 Residences

Law 91-646, as amended by 100-17; 49 CFR Part 24(A)-(F)). As is the policy of the SCDOT, in response to the non-discrimination requirements in Title VI of the *Civil Rights Act of 1964*, the relocation advisory assistance shall be provided to all eligible persons without discrimination. For more information about the relocation process, please refer to Communities, Section 3.2.12 (refer to page 3-80).

In Horry County, the Preferred Alternative crosses the easternmost boundary of the Cool Spring community, as defined by the community survey (refer to Figure 3-11, page 3-45). However, the alignment is approximately four miles to the east of the main residential areas of the Cool Spring community, which are located along S.C. Route 319. Although two relocations would occur in a block group with environmental justice populations, overall impacts would be minimal.

Overall, the pattern of residential displacements is evenly dispersed throughout populations along the Preferred Alternative. Relocations located within environmental justice populations did not constitute a disproportionately high or adverse effect on any single community. Other non-environmental justice communities would experience similar relocation effects and no particular community would bear a disproportionate portion of the relocations.

### 3.3.7.2 Community Cohesion

Community cohesion is impacted when neighborhoods are divided or relocations reduce the number of residents in a community. As discussed in the Communities Section (refer to Section 3.2, page 3-23), loss of community cohesion could occur with the construction of the Preferred Alternative. No community with environmental justice populations in the CIA study area would experience more than



minimal impacts to cohesion from the Preferred Alternative. Non-minority and non-low income communities would experience similar impacts to community cohesion and therefore, environmental justice populations would not bear a disproportionate impact. For additional discussion on community cohesion, refer to Chapter 3, Section 3.2 (page 3-23).

### ***3.3.7.3 Economic Impacts***

The CIA study area would be expected to benefit from economic opportunities created in part by the Preferred Alternative. Economic benefits would be beneficial to low-income populations in terms of additional jobs and business development opportunities.

Specific communities within the CIA study area have expressed support for the Preferred Alternative and the potential economic opportunities that it could bring to their communities. These communities include Dillon, Dog Bluff, Latta, Marion, Mullins, and Spring Branch.

Individually, there would not be a disproportionate high and adverse economic effect on any one environmental justice population area. Other non-environmental justice populations would experience similar beneficial and adverse economic effects. For additional discussion on potential economic impacts, refer to Chapter 2, Section 2.7.1.2 (page 2-42).

### ***3.3.7.4 Access and Mobility***

The Preferred Alternative may cause changes in local access and mobility in individual communities throughout the CIA study area. Therefore, environmental justice populations would not suffer a disproportionate impact from the changes to travel patterns and local access. For additional discussion on impacts to access and mobility, refer to Communities, Section 3.2 (page 3-23).

### ***3.3.7.5 Noise***

The Preferred Alternative has the potential to introduce traffic noise into neighborhoods, and there are multiple noise receivers in neighborhoods that would experience noise levels above the existing conditions. For the purpose of the environmental justice community-based study, impacted noise receivers that fell within both environmental justice block groups and survey-defined community boundaries are discussed in this section. The Preferred Alternative would have three impacted noise receivers in Mullins, and one impacted noise receiver in Zion that fall within a block group with environmental justice populations. However, due to the size of the block groups and the rural nature of the CIA study area, this did not definitively show whether or not the impacted noise receivers are indeed low-income or minority populations. Noise impacts appear to be distributed throughout the CIA study area; therefore, environmental justice populations would not experience disproportionate impacts, refer to Noise, Section 3.8 (page 3-107) for further information.



### ***3.3.7.6 Visual and Aesthetic Character***

As discussed in the Communities Section (Section 3.2, refer to page 3-23), the Preferred Alternative would have the potential to change the visual environment of environmental justice communities. The effect in view and/or character depends on the existing characteristics of the area, the distance between homes and the road, and whether the facility is at-grade, contains an elevated overpass and/or an interchange. There are several areas where the Preferred Alternative may alter the visual elements of environmental justice communities, including Mullins, Zion, and Latta. However, non-minority and non-low income communities would also experience similar impacts to their visual and aesthetic character and therefore, environmental justice populations would not bear a disproportionate impact. For additional discussion on anticipated changes to visual and aesthetic character, refer to Communities, Section 3.2 (page 3-23).

### ***3.3.7.7 Parks and Community Facilities***

No public parks, public facilities, or churches in the environmental justice communities would be impacted by the Preferred Alternative.

### **3.3.8 What efforts have been made to ensure full and fair participation of environmental justice populations in the transportation decision-making process?**

In order to engage and provide for the full and fair participation of potentially affected environmental justice communities, the following strategies were implemented:

- Public information meetings were held in each of the three counties, and advertised in the local newspapers and on television;
- Stakeholder meetings were held and included local leaders and NAACP representatives;
- Project website and toll-free hotline, which could be accessed at any time to learn the status of the proposed project and information on times and locations of meetings;
- Outreach and coordination with community ministers and leaders to facilitate contact with locals;
- Church meetings were attended to provide project information, answer questions, hear local concerns and distribute community surveys;
- Customized public involvement techniques to local populations – visits to local convenience stores and gas stations;
- Distributed community surveys through various methods to ensure full participation of all populations, including school surveys, mail surveys, door-to-door survey distribution and/or interviews; and,
- Public hearings were held in each of the three counties, and advertised in the local media, including newspapers and on television.

There will be a continual commitment to providing full and fair access to information throughout the project development process, including information of the design and construction phases, by updated information posted on the I-73 Project Website ([www.I73inSC.com](http://www.I73inSC.com)).



### 3.3.9 Summary

In general, it has been determined that all areas containing environmental justice populations would experience beneficial and adverse effects similar to those of the overall CIA study area population. No environmental justice populations would bear a disproportionate impact from the project.

Throughout project development and refinement, avoidance and minimization measures were used to lessen impacts to environmental justice populations as well as other communities. The Project Team initially designed the Preferred Alternative to avoid municipal boundaries or dense residential areas. Beyond these initial efforts of impact avoidance, the Preferred Alternative was further refined where possible. Based on public input, the Preferred Alternative was modified to minimize relocations, community disruptions, and impacts to accessibility.

## 3.4 SECTION 4(f) RESOURCES

### 3.4.1 What are Section 4(f) properties?

Section 4(f) of the *Department of Transportation Act of 1966* regulates how publicly-owned properties such as parks, recreational lands, wildlife and waterfowl refuges, and historic sites are used for transportation projects (refer to Appendix E, *Final Section 4(f) Evaluation*). Historic sites that are privately-owned are also regulated under Section 4(f). If it can be demonstrated that no prudent or feasible alternative exists to avoid a 4(f) property, then it can be used for a project, provided there is a plan to minimize harm to the property. Section 4(f) uses can be any of the following:

- a direct use if it is permanently incorporating property into the transportation project;
- a temporary use when the temporary occupancy of the property is adverse to the property's purpose; or,
- a constructive use when the proximity impacts are severe enough that the features or activities that make the property a 4(f) resource are impaired.

While the FHWA and SCDOT are not required to replace Section 4(f) resources by the *Department of Transportation Act of 1966* or applicable regulations, it is normally done as a mitigation measure for direct project impacts during the right-of-way acquisition process.<sup>41</sup> Mitigation costs should be a reasonable public expenditure and take into the account the severity of the impact to the Section 4(f) resource.<sup>42</sup>

<sup>41</sup> FHWA, Office of Planning, Environment, and Realty, *Section 4(f) Policy Paper*. March 1, 2005. <http://www.environment.fhwa.dot.gov/projdev/4fpolicy.asp> (September 13, 2007).

<sup>42</sup> *Ibid.*

### Section 4(f)

**Section 4(f) is part of the *Department of Transportation Act of 1966* which regulates the taking of publicly-owned properties for transportation projects.**

**Section 4(f) properties are publicly-owned parks, recreational lands, and wildlife and waterfowl refuges under local, state, or federal ownership. Historic sites that are under public or private ownership are also considered under Section 4(f).**



### 3.4.2 What parks, recreational facilities, and wildlife/waterfowl refuges are found in the project study area?

There is one state park, one state heritage preserve (with several tracts), approximately 18 local parks and recreational facilities, and five boat landings throughout the project study area (refer to Figure 3-26). Other recreational facilities in the project study area include ball fields, tennis courts, picnic areas, school playing fields, and playgrounds. There are no wildlife or waterfowl refuges located within the project study area.

Little Pee Dee State Park is located ten miles southeast of Dillon and four miles east of Floydale along S.C. Route 57. The 835-acre facility is managed by the South Carolina State Park Service, and offers camping, hiking, picnic areas, along with fishing at the 54-acre Lake Norton.

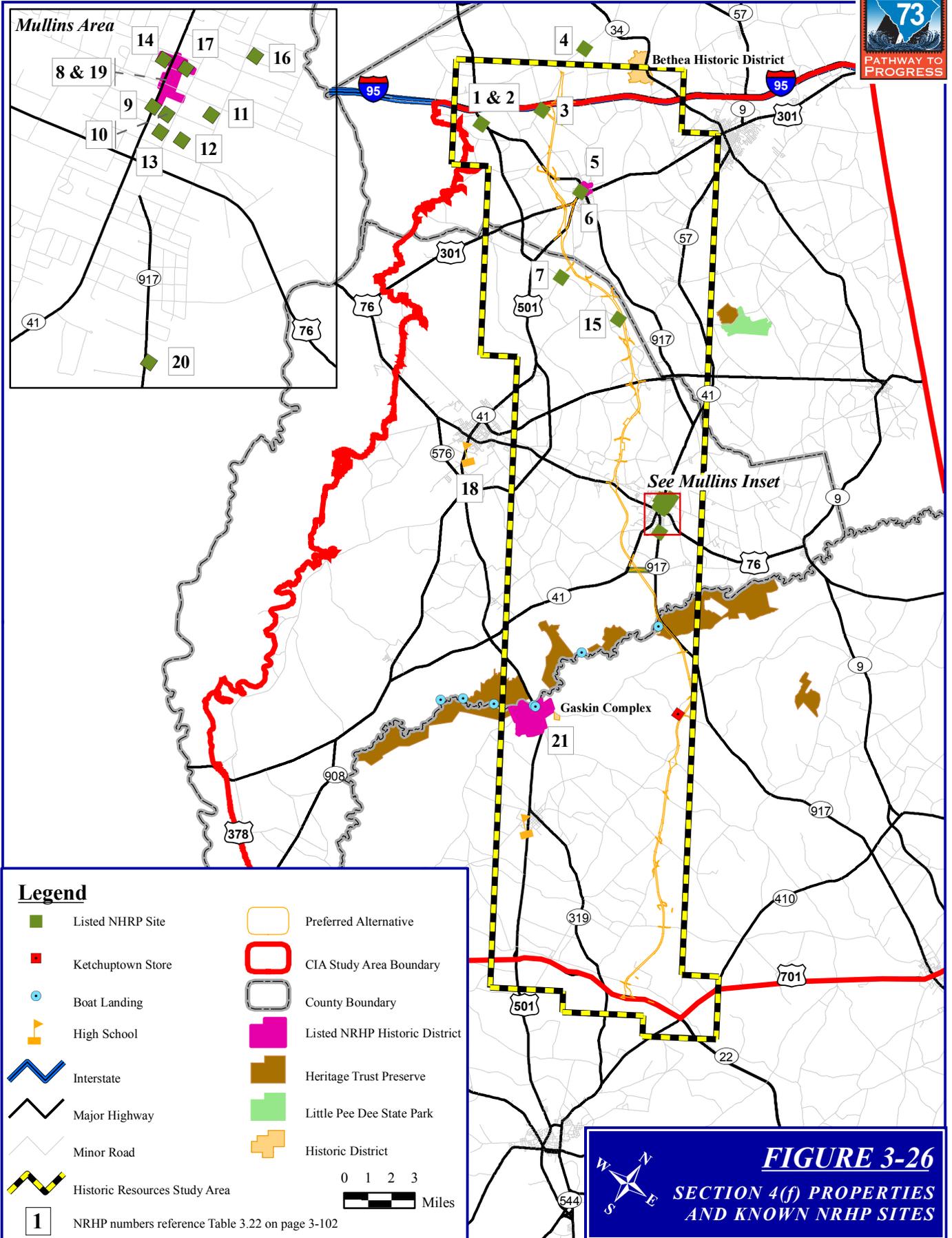
Little Pee Dee River Heritage Preserve is a property owned by SCDNR's Heritage Trust Program. The preserve can be used by the public for various activities including fishing, hunting, boating, hiking, camping, and wildlife viewing. Due to the location of the preserve in relation to the Little Pee Dee River system, the property also protects wetlands and species' habitats. The Preserve contains approximately 10,238 acres and is split into five tracts of land: Dargan, Vaughn, Tilghman, Ward, and Johnson. The Vaughn Tract is located southeast of Mullins, with access to it available from S.C. Route 917, which traverses through a portion of the preserve.

Public boat landings located along the Little Pee Dee River include the Galivants Ferry Landing that is accessible by U.S. Route 501 and Sandy Bluff Landing, which is accessible from S.C. Route 917. Other public boat landings in the vicinity of the Little Pee Dee River include Cartwheel Landing, south of Mullins; Knife Island and Davis Landings, both off S.C. Route 41; and Huggins Landing, off Horry County Road 99.

### 3.4.3 Would any Section 4(f) Resources be impacted by the Preferred Alternative?

The Preferred Alternative would impact the Vaughn Tract of the Little Pee Dee River Heritage Preserve, which contains approximately 3,846 acres (refer to Appendix E, *Final Section 4(f) Evaluation*). An estimated 30 acres would be used from the Vaughn Tract to construct a crossing of the Little Pee Dee River parallel to the existing S.C. Route 917 crossing. This impact would result in less than one percent (0.78 percent) of the total acreage of the Vaughn Tract being used for right-of-way. Access to the Heritage Preserve would be maintained; however, recreational activities within the immediate area of construction, such as fishing in the area of bridge construction, may be temporarily disrupted. No noise impacts are anticipated to the Little Pee Dee Heritage Preserve, for further information, refer to Section 3.8, page 3-107).

Mitigation would occur for the estimated 30 acres of property to be taken. A compensation package of payment for the property at a 10:1 mitigation ratio has been accepted by the SCDNR, and will be incorporated into the Record of Decision.





No indirect impacts to Section 4(f) resources are anticipated as a result of the Preferred Alternative. Cumulatively, the proposed S.C. Route 917 bridge replacement project would impact approximately less than three acres of the Vaughn Tract of the Little Pee Dee Heritage Preserve. No other impacts to Section 4(f) resources in the project study area are known at this time.

The SHPO has concurred with the determination that the Preferred Alternative would have no direct impacts to any historic resources that are protected under Section 4(f) (refer to Section 3.6, Historic Resources, and SHPO concurrence letters in Appendix A).

### 3.5 SECTION 6(f) RESOURCES

#### 3.5.1 What are Section 6(f) Resources?

The *Land and Water Conservation Fund Act of 1965* assists states in planning, acquiring, and developing outdoor recreational land and water area. Section 6(f) of the Act prohibits conversion of property acquired or developed with this fund to anything other than public outdoor recreational use.

#### 3.5.2 Would any Section 6(f) Resources be impacted by the Preferred Alternative?

There are eight Section 6(f) resources that are in the project study area in Dillon County, which include playgrounds, city parks, the Little Pee Dee State Park, and the Little Pee Dee River boat ramp.<sup>43</sup> Marion County has 14 sites that are mainly parks and swimming pools, all of which are located in the Cities of Mullins and Marion. Horry County has 21 known Section 6(f) resources including city parks, pools, ball fields, and boat landings. No Section 6(f) resources would be impacted by the Preferred Alternative.

### 3.6 HISTORIC RESOURCES

#### 3.6.1 What are historic resources?

Section 106 of the *National Historic Preservation Act of 1966* requires federal agencies to review the effects of any proposed actions on historic resources. Prior to undertaking a project, federal agencies conduct archival research and field surveys to assess resources that are currently listed or might be eligible for listing on the NRHP within the project study area.

Based on their findings, agencies make recommendations on resources in the project study area to the State Historic Preservation Office (SHPO). SHPO makes determinations as to whether a resource is eligible for listing on the NRHP and

#### Historic Resources

**Historic resources are districts, buildings, sites, structures, or objects that are significant in American history, architecture, archaeology, engineering, and culture. – (16 U.S.C. §470(a)(1)(A))**

<sup>43</sup> National Park Service, State Land and Water Conservation Fund Website. “Grant Listing,” <http://waso-lwcf.ncrc.nps.gov/public/index.cfm> (September 11, 2007).



what effect the project would have on eligible or listed resources in the area. The NRHP is a list of all historic resources that have been determined to be significant. There are four criteria to determine if a resource should be listed on the NRHP:<sup>44</sup>

- Association with a significant event(s) or broad pattern(s) of history;
- Association with a significant person(s);
- Conveys unique or distinctive architecture of high artistic value; or,
- Has the potential to yield information important to history or prehistory.

In addition to the criteria, most sites are generally required to be at least fifty years of age for listing on the NRHP.

The historic resources study area for the project consists of an approximately eight mile wide and 40-mile long corridor that begins just north of I-95 in Dillon County, extends through Marion County, and ends at S.C. Route 22 north of Conway in Horry County, and encompasses the Preferred Alternative for this project (refer to Figure 3-26, page 3-99).

### Historic Resources Study Area

The Historic Resources Study Area is an 8-mile wide corridor between I-95 and S.C. Route 22 that was surveyed for aboveground historic resources.

### 3.6.2 How was the historic resources survey conducted?

An intensive aboveground historic resources field survey was completed between July and September 2005 following guidelines established by SCDAH. The guidelines were followed to identify and document architectural resources over fifty years of age for NRHP eligibility consideration. Archival research was conducted and included a literature review and records check at SCDAH and the South Carolina Institute of Archaeology and Anthropology. The South Carolina Historical Society in Charleston, various public libraries in the respective counties, and the University of South Carolina's Caroliniana Library were consulted to identify, assess, and interpret the aboveground historical resources located in the historic resources study area, as well as to develop historic contexts for the region. Local and regional resources were also consulted to identify persons and events significant to local history and to uncover their associations with potential archaeological sites or historic resources.

### 3.6.3 What aboveground historic resources were found during the survey?

Table 3.22 details the 21 known aboveground historic resources that are listed on the NRHP within the historic resources study area. These sites are also shown on Figure 3-26 (refer to page 3-99). An additional 30 sites that are located in the historic resources study area have been previously determined by SHPO as eligible for the NRHP, but are not yet listed. During alternative development, properties listed on the NRHP or determined eligible for listing were considered constraints and efforts were made to avoid these known resources (refer to Chapter 2, Development of Alternatives, page 2-1). For more details on

<sup>44</sup> NPS, *National Register Bulletin #15*, "How to Apply the National Register Criteria for Evaluation," (1990).



**Table 3.22**  
**NRHP Sites in the Historic Resources Study Area**  
**Interstate 73 FEIS: I-95 to the Myrtle Beach Region**

Number	County	Resource Name	Location
1	Dillon	Early Cotton Press	S.C. Route 38
2	Dillon	John Hayes Farmstead	S.C. Route 38
3	Dillon	Catfish Creek Baptist Church	Catfish Church Rd
4	Dillon	Joel Allen House	Latta
5	Dillon	Latta Historic Districts (3)	Latta
6	Dillon	McMillan House	Latta
7	Marion	Old Ebenezer Church	S.C. Route 38
8	Marion	Marion Historic District	Marion
9	Marion	Rasor and Clardy Company Building	Mullins
10	Marion	AH Buchanan Company Building	Mullins
11	Marion	Imperial Tobacco Company Building	Mullins
12	Marion	Liberty Warehouse	Mullins
13	Marion	Neal and Dixon's Warehouse	Mullins
14	Marion	Old Brick Warehouse	Mullins
15	Marion	Dew Barn	Zion
16	Marion	Mt. Olive Baptist Church	Mullins
17	Marion	JC Teasley House	Mullins
18	Marion	Marion High School	Marion
19	Marion	Mullins Commercial Historic District	Mullins
20	Marion	Dillard Barn	Mullins area
21	Horry	Galivants Ferry Historic District	Galivants Ferry

those sites, refer to the *Cultural Resources Technical Memorandum*. A total of 947 historic structures were recorded during the aboveground historic resources survey of the historic resources study area. Of these, 254 were recommended eligible for the NRHP, some as part of five recommended eligible historic districts. For more information, refer to the *Cultural Resources Technical Memorandum*.

### 3.6.4 What archaeological resources are located within the historic resources study area?

A GIS-based archaeological predictive model was developed as part of the alternatives analysis. The model was designed to assess the probability of possible archaeological sites within the project study area. The known environmental and cultural attributes typical of the area were evaluated according to the different subsistence and mobility patterns of people within each prehistoric and historic time period. Environmental variables taken into consideration included soil type, the slope of the land, and the presence of water. In addition, the locations of previously recorded archaeological sites were considered. The model ranked each land unit (100 square foot portion of the landscape) with 1 for lowest probability to 10 for highest probability of encountering archaeological sites. Upland sites near surface water make up the majority of high probability sites.



The archaeological predictive model determined that 45 percent of the Preferred Alternative corridor contained areas with a high probability rating. This meant that sites with a high potential for containing artifacts could be found within the corridor of the Preferred Alternative during a Phase I shovel testing process.

Once the Preferred Alternative was designated, Phase I shovel testing was completed for a 600-foot wide corridor, extending 300 feet on both sides of the centerline of the Preferred Alternative. Phase I testing involves digging small test pits at regular intervals in areas of high probability for archaeological resources. If a significant number of resources are found, then it is considered a site. A site must then be evaluated for eligibility for listing on the NRHP.

### Phase I Archaeological Shovel Test

**A Phase I Archaeological Shovel Test is performed by digging small test pits at regular intervals in high probability areas. If a significant number of artifacts are found, then it is considered a site. This site must then be evaluated for eligibility for listing on the NRHP.**

Based on aforementioned literature searches, there are 102 previously recorded archaeological sites in the historic resources study area. While the majority have not been evaluated for NRHP eligibility, they were avoided to the maximum extent possible during alternative development. Those that were within the right-of-way of the Preferred Alternative were formally evaluated for eligibility.

### 3.6.5 What would be the potential impacts to historic resources?

A historic resource was considered directly impacted if it was partially or completely located within the Preferred Alternative's right-of-way. A visual impact may occur if the project can be seen from the historic resource. The right-of-way of the Preferred Alternative was buffered by 300 feet and examined to determine

#### Adverse Historic Effect

**An adverse affect refers to the diminishment of a property's integrity, with respect to its location, design, setting, materials, workmanship, feeling, or association.**

visual or other indirect impacts that may occur to historic resources. Other potential impacts to historic resources located outside of the right-of-way could include affecting access to the resource, a change in the resource's setting, or indirect and cumulative impacts. In the event that previously unknown cultural resources are discovered during construction, the resources will be handled according to 36 CFR §800.11 in coordination with the State Historic Preservation Office and appropriate Tribal Historic Preservation Offices.

The Preferred Alternative would impact one historic resource, archaeological site 38HR560. This site was determined eligible for the NRHP due to its ability to generate additional information important to research questions in prehistory or history. Composed of a scatter of Pre-Contact ceramic and lithic artifacts with a minor Post-Contact component, this site was determined not to warrant preservation in place. However, the Preferred Alternative would not impact the portion of the site that contributes to its eligibility. Therefore, no further investigation or mitigation is necessary.



The Ketchuptown Store, a potentially eligible resource for the NRHP, is located at the intersection of Road S-26-23 (Nichols Highway) and S-26-99 (Lake Swamp Road). It was constructed in 1927, and became a gathering point for those living in the area as a local community center, and is now a museum. Based on the determination from SHPO, no visual impacts would occur to the property due to its distance from the Preferred Alternative (refer to SHPO letters in Appendix A). The Ketchuptown Store would not be impacted by noise, as it is outside both the NACA (66 dBA) and B (71 dBA) contours for noise impacts (refer to Section 3.8, page 3-107 for further information).



**Former Ketchuptown Store**

SHPO has concurred with the determination that the Preferred Alternative would have no direct impacts to historic properties, historic districts, or archaeological sites that would warrant preservation in place (refer to SHPO concurrence letters in Appendix A).

### Viewshed

**A viewshed includes all of the physical features of a landscape that define a particular landscape type that can be seen from the historic resource. A change in the relationship of a historic resource to its surrounding features can diminish the qualities that make the resource eligible for the NRHP.**

Future development could affect potentially eligible unidentified archeological resources in the historic resources study area, particularly in the area of interchanges. Development near aboveground historical resources could diminish the rural setting that contributes to the historical significance or lead to physical destruction of sites. While special protections are required by federal agencies to avoid and minimize impacts to NRHP listed sites, there are no such requirements on private developers to do so. Development in the areas of the historic districts could change the nature of the viewshed and diminish the historical significance of eligible properties.

## 3.7 HAZARDOUS MATERIALS AND WASTE SITES

### 3.7.1 What are hazardous materials/wastes?

A hazardous material is generally defined as any material that has or will have, when combined with other materials, a harmful effect on humans or the natural environment. Characterized as reactive, toxic, infectious, flammable, explosive, corrosive, or radioactive, a hazardous material may be in the form of a solid, sludge, liquid, or gas.<sup>45</sup> Hazardous waste would be a hazardous material that has been used and discarded.

<sup>45</sup> RCRA Subtitle C, 40 CFR Part 251.



Hazardous materials and waste sites are regulated primarily by the *Resource Conservation and Recovery Act of 1976*, as amended (RCRA); the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*; and the *Superfund Amendments and Reauthorization Act of 1986*.

### Hazardous Material And Waste Sites

Potential hazardous material and waste sites include service stations, landfills, salvage yards, and industrial sites, as well as aboveground and underground storage tanks.

### 3.7.2 Are there any hazardous materials/waste sites located within the project study area?

Potential hazardous waste sites were inventoried based on a review of federal records of regulated sites. In addition, SCDHEC records were reviewed to identify potential hazardous material sites. Table 3.23 below provides a summary of the 516 sites identified within the project study area.

**Table 3.23**  
**Summary of Hazardous Material and Waste Sites Identified**  
**within the Project Study Area**  
**Interstate 73 FEIS: I-95 to the Myrtle Beach Region**

Landfills <sup>1</sup>	64
Treatment, Storage, and Disposal Facilities <sup>2</sup>	1
Hazardous Material Facilities <sup>3</sup>	404
Toxic Release Inventory Sites <sup>4</sup>	47
<b>Total Number of Sites within the Project Study Area</b>	<b>516</b>

<sup>1</sup> Landfills and solid waste disposal facilities are regulated under RCRA. SCDHEC maintains the inventory of permitted and inactive landfills in South Carolina.

<sup>2</sup> Treatment, Storage, and Disposal Facilities are regulated under RCRA. These facilities treat, store, or dispose of hazardous waste from permitted generators of the waste.

<sup>3</sup> Hazardous Material Facilities include hazardous waste sites, hazardous waste generators, aboveground storage tanks and underground storage tanks, leaking underground storage tanks, groundwater contaminated sites, releases of oil and hazardous substances and sites proposed to or on the National Priorities List.

<sup>4</sup> The Toxic Release Inventory is maintained by the USEPA of chemical releases from federal and industrial facilities. The inventory provides information on the release and transfer of toxic chemicals from facilities in any given area.

### 3.7.3 Would the Preferred Alternative impact any known potentially hazardous material/waste sites?

The 400-foot corridor of the Preferred Alternative would potentially impact three known hazardous materials/waste sites (refer to Table 3.24). While all three sites have had releases, all have since been classified as either inactive or received a letter from SCDHEC stating that no further action was required. Discovery of contamination during construction would result in the removal and proper disposal of contaminated soil and/or groundwater in accordance with state and federal requirements prior to construction.



**Table 3.24**  
**Hazardous Materials and Waste Sites Potentially Impacted**  
**by the Preferred Alternative**  
**Interstate 73 FEIS: I-95 to the Myrtle Beach Region**

Site	Description
Luther Martin Grocery and C&M Convenience, 3842 Joiner Swamp Rd, Galivants Ferry (Now Harold's Convenience Store)	One 3,000 gallon capacity gasoline UST and two 2,000 gallon capacity gasoline USTs, all of which have been removed. A LUST was reported in June 2001, but received a status of no further action in November 2001. Currently there are four fuel ASTs present and in use.
Lanes Convenience Store, Hwy 301 & Hwy 501, Latta	One 3,000 gallon capacity gasoline UST and one 4,000 gallon capacity gasoline UST, both of which have been abandoned and removed from the ground. Groundwater monitoring was conducted for a gasoline release reported in December 1991, but the site is currently inactive.
Penske Truck Leasing, 4520 Hwy 301S, Latta	One 1,000 gallon capacity UST containing waste oil, which was abandoned and removed from the ground in 1996. A LUST was reported in February 1996, but received a status of no further action in March of 1996. Currently, there is one waste oil AST present and in use. The site is listed as a RCRA Conditionally Exempt Small Quantity Generators (CESQGs). CESQGs generate less than 100 kg of hazardous waste per month.
LUST – Leaking Underground Storage Tank UST – Underground Storage Tank AST – Aboveground Storage Tank	



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