5 SECTION 4(F) EVALUATION

Section 4(f) of the Department of Transportation Act of 1966 protects publicly owned parks, recreation areas, and wildlife/waterfowl refuges, as well as historic sites listed or eligible for listing in the National Register of Historic Places (NRHP). These lands can only be used for a federally-funded transportation project if there is no other feasible and prudent alternative, and the project incorporates all possible planning to minimize harm.

This document was prepared in accordance with Federal Railroad Administration (FRA) Procedures for Considering Environmental Impacts (64 FR 28545 [May 26, 1999]). In addition, this document also follows the procedures for implementing Section 4(f) outlined in 23 CFR 774 [March 12, 2008], which apply to the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). Although FRA is not directly subject to this rule, the Agency has determined these procedures are appropriate for use for the SEHSR project.

Section 4(f) use, as defined in 23 CFR 774.17, occurs in the following cases:

- Land is permanently incorporated into a transportation facility through partial or full acquisition (i.e., "use")

- There is temporary occupancy of land that is adverse in terms of the preservationist purpose of Section 4(f) (i.e., "temporary use")

- There is no permanent incorporation of land, but the proximity of a transportation facility results in impacts so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (i.e., "constructive use"). Examples of constructive use include substantial increases in noise levels at an outdoor amphitheater, impairment to aesthetics, and restrictions on access to a resource

If the use of a Section 4(f) resource would occur due to a proposed action, a Section 4(f) evaluation must be prepared. The Section 4(f) evaluation determines whether there is no feasible and prudent alternative to the use of land from a Section 4(f) resource and whether the proposed action includes all possible planning to minimize harm to the resource resulting from its use.

Where analysis concludes there is no feasible and prudent avoidance alternative, the alternative that causes the least overall harm to Section 4(f) resources must be selected. This determination is made by balancing the factors listed in 23 CFR 774.3(c):

i) The ability to mitigate adverse impacts of each Section 4(f) property (including any measures that result in benefits to the property);
ii) The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
iii) The relative significance of each Section 4(f) property;
iv) The views of the official(s) with jurisdiction over each Section 4(f) property;
v) The degree to which each alternative meets the purpose and need for the project;
vi) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
vii) Substantial differences in costs among the alternatives.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005, amended existing Section 4(f) legislation to simplify the processing and approval of projects that have only *de minimis* impacts on resources protected by Section 4(f). For historic resources, a *de minimis* impact means that the federal transportation agency has determined that, in accordance with 36 CFR 800, no historic property is affected by the project or the project would have no adverse effect on the property in question. If after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, a transportation project results in a *de minimis* impact on a Section 4(f) property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. The State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), and the Advisory Council on Historic Preservation (ACHP) (if participating in the consultation process), must concur in writing with this determination.

5.1 Description of the Proposed Action

5.1.1 Purpose for the Project

The Richmond, VA, to Raleigh, NC, portion of the SEHSR is an integral part of the overall Washington, DC, to Charlotte, NC, corridor. It constitutes 162 miles of the approximately 450-mile corridor that was evaluated in the 2002 Tier I Environmental Impact Statement (EIS) (NCDOT and VA DRPT, 2002). The purpose for the segment from Richmond to Raleigh is tied to implementation of the larger corridor. Therefore, the purpose of this proposed action is to facilitate the previously approved purpose for the SEHSR Tier I EIS, which includes the following and is applicable to the sections from Richmond to Raleigh:

- Divert trips from air and highway within the travel corridor, thus reducing the growth rate of congestion
- Provide a more balanced use of the corridor's transportation infrastructure
- Increase the safety and effectiveness of the transportation system within the travel corridor
- Serve both long-distance business and leisure travelers between and beyond Virginia and North Carolina, including Amtrak's Northeast Corridor, which extends from Washington, DC, to Boston, MA (with extensions planned beyond Boston), as well as points south

5.1.2 Project Description and Approach

The SEHSR project involves the incremental development, implementation, and operation of high speed rail (HSR) service in the approximately 450-mile travel corridor from Washington, DC, through Richmond, VA, and Raleigh, NC, to Charlotte, NC. A "tiered" approach was adopted for the required environmental studies because of the length of the corridor. The Tier I EIS covered the entire Washington, DC, to Charlotte, NC, corridor at a program level, establishing the overall project purpose and need, along with the preferred corridor. This Tier II study includes detailed environmental documents appropriate to the proposed actions planned within the preferred corridor between Richmond, VA, and Raleigh, NC. Other environmental documentation will be prepared separately for implementation of the remainder of the corridor, as necessary.

The North Carolina Department of Transportation Rail Division (NCDOT) and the Virginia Department of Rail and Public Transportation (DRPT), with their federal partners, the Federal Railroad Administration (FRA) and the Federal Highway Administration (FHWA), determined that the SEHSR corridor should be analyzed using an "incremental" HSR approach with fossil fuel train sets (versus electrified). This decision was based on the findings of earlier feasibility studies. The incremental approach minimizes impacts to both the human and natural environments by using existing rail infrastructure and rail right of way (ROW) over the majority of the corridor. Use of existing infrastructure also reduces the initial capital investment required by the system. In addition, the approach does not preclude future electrification of the corridor.

The Tier I SEHSR environmental document examined nine Study Area Alternatives (centered around existing rail ROW). In addition to these Study Area Alternatives, a No Build Alternative was also considered. It was determined the No Build Alternative did not meet the purpose and need of the SEHSR project because it would not improve air quality or reduce net energy per passenger mile traveled in the corridor, nor would it offer additional transportation choices, ease congestion, or improve overall transportation system safety and effectiveness. Thus, the No Build Alternative was dropped from consideration and is not included in this Tier II analysis.

The preferred study corridor that was selected in the Tier I EIS runs from Washington, DC, through Richmond, VA, Petersburg, VA, Henderson, NC, Raleigh, NC, and Greensboro, NC, to Charlotte, NC, with a connection to Winston-Salem, NC (NCDOT and VA DRPT, 2002). There is existing freight and conventional passenger rail service operating within the preferred corridor north of Petersburg, and west of Raleigh. The corridor from Petersburg to Raleigh is inactive in Virginia and northern North Carolina (from the Virginia state line to Norlina, NC), with only freight service from Norlina to Raleigh.

The Tier II EIS for the proposed action is focused on the portion of the corridor between Richmond, VA, and Raleigh, NC, which includes the section without existing rail service. Figure 1.1 shows the study corridor for the SEHSR Richmond, VA, to Raleigh, NC, Tier II EIS.

5.1.3 Project Alternatives

The SEHSR Tier II EIS applies the incremental approach to the development of alternative alignments that was adopted in the Tier I EIS. This incremental approach utilizes existing rail lines or segments of existing rail lines in conjunction with areas of new track, taking advantage of existing rail ROW and infrastructure through improvements such as track upgrades, double tracking, additional sidings, curve straightening, train signal improvements, crossing consolidations, and grade separated crossings.

Alternatives were developed based on a variety of design parameters and environmental considerations. Initially, alignment options were narrowed to two optimum alignments for further study. As more detailed information became available throughout the design process, a third alignment was added. In most cases, the third alignment provides an avoidance alternative in areas with potential impacts to historic properties.

For the DEIS, the project corridor was divided into 26 sections labeled AA to V, from Richmond, VA, south to Raleigh, NC (Figure 2.1). Throughout much of the corridor, the alignments are on common location within existing rail ROW in order to minimize impacts.

The endpoints of each of the 26 sections are in locations where the alternative alignments are in a common location. The alternative alignments are called VA1, VA2, VA3 in Virginia, and NC1, NC2, NC3 in North Carolina. Except where otherwise specified, the VA3 and NC3 alignments are concurrent with VA1 and NC1, respectively. Overviews of the alignments in each of the 26 sections are provided in Chapter 2 of the DEIS.

5.2 Description of the 4(f) Resources – Parks, Recreation Areas, Wildlife Refuges

The project would not use land from any recreation area or wildlife refuge; however, it would cross five publicly-owned trails in six locations, require a small amount of ROW from three public parks (two local and one national park), and come in close proximity to three public parks and a school playground (Table 5-1). The resources are listed in the order they appear in the project study area from north to south.

Table 5-1
Parks, Recreation Areas, and Wildlife Refuges in the SEHSR Corridor

Resource Name	Section(s)/ Mapsheet(s)	County	State
Richmond Canal Walk	AA/1	Richmond	VA
James River Park System – Slave Trail	AA/1	Richmond	VA
Thomas B. Smith Community Center	AA/4	Richmond	VA
Chester Kiwanis Historical Park (Planned)	BB/12	Chester	VA
Ettrick Park & Mayes-Colbert Ettrick Community Building	CC/20	Chester	VA
Appomattox Riverfront Trail (Planned)	CC/24	Chesterfield	VA
Upper Appomattox Canal Trail	CC/24	Petersburg	VA
Petersburg National Battlefield (Fort Wadsworth Unit)	DD/28	Petersburg	VA
Tobacco Heritage Trail	E/66 and I/83	Brunswick and Mecklenburg	VA
Centennial Park	I/83	Mecklenburg	VA
Franklinton Elementary School	S/128	Franklin	NC
Middle Crabtree Creek Greenway	V/148	Wake	NC

5.2.1 Richmond Canal Walk (VA)

The City of Richmond's Canal Walk on the north side of the James River stretches 1.25 miles along the James River and the Kanawha and Haxall Canals, with access points at nearly every block between 5th and 17th Streets. The Canal Walk presents four centuries of Richmond's history interpreted through medallions, monuments, and exhibits along the Canal Walk and Brown's Island.

5.2.2 James River Park System – Slave Trail (VA)

The City of Richmond, VA, James River Park System includes nearly 550 acres lining both banks of the James River from Huguenot Flatwater to Ancarrow's Landing. The SEHSR project would cross the Slave Trail portion of the park. The Slave Trail starts at Ancarrow's Landing/Manchester Slave Dock, a boat landing and fishing spot where slave ships docked

in the 1700s and 1800s. The Slave Trail departs the landing and follows a 1.3 mile path that chronicles the history of the slave trade of Africans brought to Richmond until 1865. It follows a route through former slave markets, beside the Reconciliation Statue, past Lumpkin's Slave Jail and the Negro Burial Ground to First African Baptist Church, a center of African-American life in pre-Civil War Richmond. The Richmond City Council established the Richmond Slave Trail Commission in the late 1990s to raise the level of awareness and informational accuracy about Richmond's role in the slave trade.

5.2.3 Thomas B. Smith Community Center (VA)

The City of Richmond, VA, Department of Parks, Recreation, and Community Facilities operates the Thomas B. Smith Community Center at 2015 Ruffin Road. This facility contains an athletic field, baseball diamond, basketball courts, community center, lighted areas, playground shelters, restrooms, tennis courts, and a "tot lot."

5.2.4 Chester Kiwanis Historical Park (Planned) (VA)

In 2008, the Kiwanis Club of Chester agreed to donate the property at 4001 Gill Street in Chester, VA, to Chesterfield County for development as the Chester Kiwanis Historical Park. The land was formerly owned by the Chester Hotel Company and was the business, social, and church center of the original Chester Village. The property is planned to be used as a public park for passive recreation and historical interpretation. Planned improvements include walking trails, landscaping, and interpretive signage.

5.2.5 Ettrick Park & Mayes-Colbert Ettrick Community Building (VA)

Chesterfield County, VA, Parks and Recreation Department operates the Ettrick Park and Mayes-Colbert Ettrick Community Building at 20400 Laurel Road in Ettrick. In addition to a community center that is open to the public and available for rent, the park offers multiple athletic fields, tennis courts, and basketball courts.

5.2.6 Appomattox Riverfront Trail (Planned) (VA)

The planned Appomattox Riverfront Trail is being implemented by the Chesterfield County Department of Parks and Recreation and will be located on the north side of the Appomattox River near Ettrick, VA. The trail will extend for 1.8 miles along the riverfront between Virginia State University (VSU) and the Village of Ettrick. It is being planned by a team of volunteers, representing diverse community interest, and may eventually link to other recreational resources.

5.2.7 Upper Appomattox Canal Trail (VA)

The Upper Appomattox Canal Trail in the City of Petersburg, VA, is a 3.6 mile trail following the towpath of the Upper Appomattox canal. It is included in the Appomattox River Corridor Plan, an initiative to explore creation of a greenway and blueway corridor along the Lower Appomattox River undertaken jointly by the Crater Planning District Commission, Friends of the Lower Appomattox River (FOLAR), and the six jurisdictions along the twenty-two mile stretch of Appomattox River. The Upper Appomattox Canal Trail begins at Appomattox Riverside Park (historic Ferndale Park) and ends at Campbell's Bridge on Fleet Street (State

Highway 36) near Virginia State University and downtown Petersburg. The trail provides access to many historic spots along the river, including the Abutment Dam.

5.2.8 Petersburg National Battlefield (Fort Wadsworth Unit) (VA)

The Fort Wadsworth Unit of Petersburg National Battlefield is operated by the National Park Service. It is approximately 10.54 acres in size and is located adjacent to Collier rail yard in Petersburg, VA. Built following the Battle of the Weldon Railroad in August 1864, Fort Wadsworth anchored the extreme left of the Union siege lines for more than a month. It secured the Union grip on the Petersburg and Weldon Railroad. Interpretive markers within the fort discuss its significance.

5.2.9 Tobacco Heritage Trail (VA)

The Tobacco Heritage Trail, a rails-to-trails corridor along an abandoned Norfolk-Southern rail corridor, intersects the study area in Alberta and La Crosse, VA. The Tobacco Heritage Trail will connect existing trail segments and create a new trail within five Virginia counties: Brunswick, Mecklenburg, Halifax, Charlotte, and Lunenburg, with a potential spur trail connection to Dinwiddie County. The trail is managed by the Roanoke River Rails-to-Trails (RRRT), a 501(c)(3) tax-exempt Virginia corporation. RRRT is a consortium of Southern Virginia localities, organized to facilitate acquisition and development of the abandoned railroad ROW required for the trail. Within Alberta, VA, the Tobacco Heritage Trail follows the abandoned Norfolk Southern line and crosses the SEHSR project corridor in the vicinity of Second Avenue. Within La Crosse, VA, the trail follows the abandoned Norfolk Southern line and crosses the SEHSR project corridor in the vicinity of Central Avenue.

5.2.10 Centennial Park (VA)

The Town of La Crosse, VA, operates Centennial Park at the intersection of Main Street and the abandoned Norfolk Southern railroad line. The primary focus of the park is a train caboose, which recognizes the town as a place where railroads once crossed.

5.2.11 Franklinton Elementary School (NC)

The Franklinton Elementary School located at 431 South Hillsborough Street in Franklinton, NC, has playgrounds, a practice field, a baseball field, a football field, and a soccer field that are available for public use. Members of the public and organizations can apply to use these facilities. The principal reviews the facility use applications. The school system has first priority for use, then the Franklin County Parks and Recreation Department, and then the general public.

5.2.12 Middle Crabtree Creek Greenway (NC)

The Middle Crabtree Creek Greenway is located in Northern Raleigh and extends approximately 11 miles, from Milburnie Road to just short of Duraleigh Road. The trail is owned by the City of Raleigh and provides (via connections) access to the Raleigh downtown area, North Carolina Museum of Art, and area shopping malls. A connection is proposed to Umstead State Park, located west of Raleigh and to the Neuse River east of Raleigh. The trail crosses the SEHSR corridor in Raleigh, just south of the I-440 Belt Line and Yonkers Road and north of Hodges Street.

5.3 Description of the 4(f) Resources – Historic Architecture Sites

Section 3.12 of the DEIS describes the historic architecture resources within the Area of Potential Effects (APE) of the SEHSR project that were determined to be eligible for listing or are listed in the NRHP. Listed and eligible resources must meet at least one of the four NRHP key criteria:

- Criterion A - associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B - associated with the lives of persons significant in our past; or
- Criterion C - embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D - have yielded or may be likely to yield, information important in prehistory or history

The historic architecture resources (excluding battlefields) eligible for protection under Section 4(f) are described in Tables 5-2 and 5-3. The resources are listed in the order they appear in the project study area from north to south. More detailed information can be found in Section 3.12. Correspondence with the Virginia Department of Historic Resources (VDHR) and North Carolina State Historic Preservation Office (HPO) is included in Appendix L.

Table 5-2 Historic Architecture Resources in the SEHSR Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Seaboard Air Line Railroad Corridor	AA, BB, CC/ 1-19, 23-24	Chesterfield, Colonial Heights, Petersburg, Richmond	Eligible/A	Historic railroad corridor that represents the origins and growth of the railroad industry in the Richmond to Petersburg corridor; reflects the post-Civil War trend of merging smaller operations to provide better service while being more economical
C. & O. & Seaboard Railroad Depot	AA/1	Richmond	Listed/A, C	Built 1901, the monumental structure symbolizes the importance of the rail terminal as an entrance gateway to Richmond ; example of the influence of the French Ecole des Beaux Arts on American building
Shockoe Valley & Tobacco Row Historic District	AA/1	Richmond	Listed/A, C	Circa 1740, Encompasses the area of Richmond's earliest residential, commercial, and manufacturing activity; architectural styles ranging from Federal through 20th-century industrial vernacular
Shockoe Slip Historic District	AA/1	Richmond	Listed/A, C	Circa late 19th and early 20th century, erected as wholesale food or tobacco warehouses, with some serving light industry; buildings generally are modified Italianate in style
James River and Kanawha Canal Historic District	AA/1	Richmond	Listed/A, C	Circa 1785, canal improved navigation on the James River from Richmond to Botetourt County a distance of approximately 200 miles; District comprises of the canal and canal towpath

Table 5-2 Historic Architecture Resources in the SEHSR Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Atlantic Coast Line Railroad Corridor	AA, BB, CC/ 10-24	Chesterfield, Colonial Heights, Petersburg, Richmond	Eligible/A	Historic railroad corridor that represents the origins and growth of the railroad industry in the Richmond to Petersburg corridor; reflects the post-Civil War trend of merging smaller operations to provide better service while being more economical
Manchester Warehouse Historic District	AA/1-2	Richmond	Listed/A, C	Post 1880, 42 block industrial area related to the post-war community of Manchester, VA
Williams Bridge Company	AA/2	Richmond	Eligible/A, C, D	Built in 1919 to assist with World War I war efforts; also used by the US government during World War II; eligible boundary contains main factory and apartment structures used to house workers during both world wars
Lucky Strike/RJ Reynolds Tobacco	AA/2	Richmond	Eligible/A,C	Circa 1955 industrial complex made up of brick buildings and metal storage facilities
Transmontaigne Product Services, Inc.	AA/2	Richmond	Eligible/A	Used to refine, store, ship, and process oil extracts for almost 80 years; founded in 1928 as Gulf Refinery Company; associated with the history of oil production and transport in Richmond
Davee Gardens Historic District	AA/4	Richmond	Eligible/A, C	Planned, symmetrical suburb of Richmond, established in 1947
Dupont Spruance	AA/5-6	Chesterfield, Richmond	Eligible/A	1,500 acre processing plant; first building constructed in 1929; factory played a significant role in the development of textiles and plastics in the US

Table 5-2 Historic Architecture Resources in the SEHSR Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Sheffields; Auburn Chase; Bellwood; Building 42 - DSCR Officer's Club; New Oxford	AA/8	Chesterfield	Listed/A, C, D	Circa 1797, representative of the changes in the Richmond area economy, from plantation to tenant farm to military depot; The main dwelling is a Federal style structure with Greek Revival modifications;
USDOD Supply Center Historic District; Bellwood-Richmond Quartermaster Depot Historic District	AA/7-8	Chesterfield	Eligible/A, B, C, D	Resource encompasses Sheffields - Bellwood described above; Circa 1940, compound established as the central depot for Richmond area activities associated with World War II
Richmond & Petersburg Electric Railway	AA, BB, CC/ 4-12, 18, 22-23	Chesterfield, Colonial Heights, Petersburg, Richmond	Eligible/A	Circa 1902, creation of this line was the direct impetus for large-scale modifications to settlement patterns in central Virginia
House at 3619 Thurston Rd	AA/9	Chesterfield	Eligible/C	Circa 1900, 1.5-story Colonial Revival dwelling with a gambrel roof and flared eaves
Centralia Post Office	BB/10	Chesterfield	Eligible/A	Served as one of the pivotal social and economic centers of the Centralia community
Ragland House/4626 Centralia Rd	BB/10	Chesterfield	Eligible/C	Circa 1890, 2.5-story frame single-family dwelling with brick foundation and raised basement
Circle Oaks/4510 Centralia Road	BB/10	Chesterfield	Eligible/C	Circa 1840, two-story single family dwelling with slave quarters and a kitchen
Chester Historic District	BB/11-13	Chesterfield	Eligible/A, C	About 10 blocks within Village of Chester; demonstrates a successful planned community in the mid-nineteenth century; high number of extant architectural resources within its period of significance (1830 to 1958)

Table 5-2 Historic Architecture Resources in the SEHSR Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Chester #94 Masonic Lodge	BB/12	Chesterfield	Eligible/A	Circa 1905, simple two-story, one-bay, frame meeting hall; important at the local level as a historic Masonic lodge that received its charter in 1878
Pretlow House	BB/12	Chesterfield	Eligible/B	Circa 1850 home to two notable Chester residents, Joseph Snead and Thomas Pretlow
Eichelberger House	BB/12-13	Chesterfield	Eligible/C	Circa 1890, 1.5-story vernacular Queen Anne-Eastlake style single dwelling with Central Passage plan; eligible boundary includes a stone gate near of the intersection of the former Richmond & Petersburg Railroad
Ellerslie	CC/17-18	Colonial Heights	Listed/A, C	Circa 1857, associated with the development of Colonial Heights; an excellent example of Italianate architecture
Battersea	CC/24	Petersburg	Listed/A, B, C, D	Built 1768 for Colonel John Banister, the first mayor of Petersburg and a signer of the Articles of Confederation; a substantial stuccoed brick house that still retains its historic rural character
North Battersea/Pride's Field Historic District	CC/23-24	Petersburg	Listed/C	Circa mid-to-late 19th and early 20th century, Italianate, Gothic Revival and Colonial Revival styles residences
Defense Road	CC/25-27	Petersburg	Eligible/A, C	Colonial Revival-era public parkway designed by the National Park Service in the 1920s and built by the Civilian Conservation Corps as a means of aiding tourists visiting the numerous Petersburg area Civil War earthworks and forts; maintains its original white/grey pavement and the surrounding park-like setting.

Table 5-2 Historic Architecture Resources in the SEHSR Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Dimmock Line/Earthworks	CC/26-27	Petersburg	Eligible/A, B, C	Series of Confederate defenses around Petersburg; construction began in 1862 and was primarily built with slave labor under the guidance of Captain Charles Dimmock; great example of a trench line used throughout the Civil War
Bridge over Defense Road	CC/26-27	Petersburg	Eligible/A, C	Single-span, three-lane, segmental arch bridge constructed in 1936 as part of the larger Defense Road parkway project
Evergreen	A/37	Dinwiddie	Eligible/C	Circa 1790, example of a Federal-era dwelling
Courtworth	C/44	Dinwiddie	Eligible/C	Circa 1878, example of a late nineteenth-century vernacular dwelling incorporating Victorian motifs
Bowen House	C/45	Dinwiddie	Eligible/C	Circa 1878, example of late Victorian domestic vernacular architecture
W. Boisseau's Store, Warehouse, Dwelling	C/45	Dinwiddie	Eligible/A, C	Circa 1900, examples of rural commercial/domestic complexes of the early twentieth century in southern Virginia
Bank Building	C/50	Dinwiddie	Potentially Eligible/C	Example of a small-town banking institution
Mayton House	C/51	Dinwiddie	Eligible/C	Circa 1905, example of early twentieth-century vernacular Colonial Revival domestic architecture
Honeymoon Hill Farm	C/51	Dinwiddie	Eligible/C	Circa late 19th century, Good example of a vernacular dwelling
Wynnhurst	D/54-55	Brunswick	Eligible/C	Built 1925, example of an early twentieth-century Dutch Colonial dwelling
Blick's Store	D/54-55	Brunswick	Potentially Eligible/C	Circa 1909, example of an early 20th century crossroads store
Tourist Guest House	G/74	Brunswick	Eligible/C	Circa 1926, Craftsman-style tourist house

Table 5-2 Historic Architecture Resources in the SEHSR Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Oak Shades	G/74	Brunswick	Eligible/C	Built 1812, rural interpretation of the Federal style
Evans House	H/78-79	Meckenburg	Eligible/C	Built 1930, ornate example of an American Foursquare dwelling
Smelley House	I/82	Mecklenburg	Eligible/C	Built 1880, Victorian-era house represents a rural interpretation of the highly ornate Queen Anne style
La Crosse Commercial Historic District	I/83	Mecklenburg	Eligible/A, C	Collection of early twentieth century commercial buildings; significant as a boom community created by the construction of the railroad that brought economic expansion to the region
Wright Farmstead	J/84-85	Mecklenburg	Eligible/A, C, D	Associated with the history of agriculture in this area, particularly the late-nineteenth/early-twentieth century change in the meat-smoking industry; farmstead includes a main house, four outbuildings, and an archaeological site
Sardis Methodist Church	J/86	Mecklenburg	Eligible/C	Built 1911, example of a vernacular early-twentieth century ecclesiastic structure
Bracey Historic District	K/89	Mecklenburg	Eligible/A, C	Circa late 19th century, example of a small community created by the construction of the railroad that brought economic expansion to the region; architectural example of a railroad community
Granite Hall/Fitts House	L/92-93	Mecklenburg	Eligible/C	Circa early 20th century, example of Classical Revival architecture

Source: *Berger, 2005; Dovetail, 2008, 2009b.*

Table 5-3 Historic Architectures Resources in the SEHSR Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Warren County Training School	L/94-95	Warren	Eligible/A, C	Built 1922, first and only high school for African Americans in the county; large and architecturally sophisticated example of the rural schools built for black communities
Wise School	L/95	Warren	Eligible/A, C	Built 1904, reflects the era of school consolidation in NC; imposing and rare surviving example of the rural public schools
House (East side of US 1, Wise, NC)	M/96	Warren	Eligible/C	Circa 1890, especially stylish expression of a common regional design
Holtzmann Farm	M/101	Warren	Eligible/A	Circa 1880, illustrates the agricultural practices and self-sufficiency of a middling Ridgeway farmer
Chapel of the Good Shepherd	M/101-102	Warren	Listed/A, C	Built 1871, Gothic Revival chapel; landmark in Ridgeway community
Dr. Thomas B. Williams House and Office	M/102	Warren	Eligible/C	Circa 1890 residence, size and architectural embellishments reflected the wealth and status of the Williams family
William J. Hawkins House	N/103	Warren	Listed/A, B, C	Circa 1850, Greek Revival and Italianate residence; illustration of the prosperous plantation society; home of Dr. William J. Hawkins;
Middleburg Community House (Middleburg Steakhouse)	O/108	Vance	Eligible/A, C	Circa 1930, financed by the Civil Works Administration; rustic style for Depression era residence
House (Allison Cooper Rd, Middleburg vicinity)	O/108	Vance	Eligible/C	Circa 1880, Greek Revival residence
Holloway Farm	O/109-110	Vance	Eligible/A, C	Late 19th century farm, illustrates the rise of tobacco cultivation; traditional domestic and agricultural buildings

Table 5-3 Historic Architectures Resources in the SEHSR Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
William Haywood Harris Farm	O/109-110	Vance	Eligible/A, C	Built 1860 for tobacco cultivation; Greek Revival residence
Forrest Ellington Farm	O/110	Vance	Eligible/A	Circa 1920-1950 farmstead
R. B. Carter House	P/114	Vance	Eligible/C	Built 1892, adaptation of up-to-date picturesque architecture to traditional forms
Henderson Historic District and Proposed Boundary Expansion	P/114-115	Vance	Listed/A, C	Circa 1890-1930, tobacco market and regional industrial center; represents the national design and style trends of the period
Houses (2 bungalows on E Young Ave)	P/115	Vance	Eligible/A, C	Circa 1900, gabled bungalows
Mistletoe Villa	P/115	Vance	Listed/C	Built in 1885, Queen Anne residence
South Henderson Industrial Historic District	P/115-116	Vance	Eligible/A, C	Early 20th century small-scale commercial buildings, workers dwellings, and three industrial complexes; illustrates rail-oriented industrial development
Vance Flour Mill (Sanford Milling Co.)	P/115-116	Vance	Eligible/A, C	Circa 1920 factory; contributing element to South Henderson Industrial Historic District; represents innovation in industrial construction
Houses (5 worker houses on 1400 block of Nicholas St)	P/116	Vance	Eligible/A, C	Circa 1910-1920 worker dwellings; contributing elements to South Henderson Industrial Historic District
Houses (3 side gable houses on 1500 block of Nicholas St)	P/116	Vance	Eligible/A, C	Circa 1910-1920 worker dwellings; contributing elements to South Henderson Industrial Historic District
Esso Gasoline Station	P/117	Vance	Eligible/A, C	Circa 1930, pre-World War II gasoline station; Spanish Colonial Revival
Confederate Cemetery	Q/121	Vance	Eligible/A	Circa 1864-1865, one of the few Confederate cemeteries in North Carolina
Saint James Episcopal Church	Q/121	Vance	Listed/C	Circa 1850, Carpenter Gothic style church

Table 5-3 Historic Architectures Resources in the SEHSR Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Hedgepetch and Finch Store	Q/121	Vance	Eligible/A, C	Late 19th century general merchandise store; marshalling point for agricultural products
Person-McGhee Farm	Q, R/124-125	Franklin, Vance	Listed/A, C	Circa 1830, well-preserved farmstead; Queen Anne dwelling surrounded by an array of outbuildings
Raleigh and Gaston Railroad Bridge Piers (Tar River)	Q, R/124	Vance	Eligible/A, C	Circa 1840 railroad piers; oldest railroad structures in the state; illustrate the design, material, and method of construction employed in building before the Civil War
Franklinton Historic District (Includes Sterling Mill Historic District)	S/127-128	Franklin	Eligible/A, C	Epitomizes the development of a Piedmont railroad town circa 1890-1920; remains one of the most intact, small railroad towns in the Piedmont
Church	S/127-128	Franklin	Eligible/A, C	Circa 1891, Gothic Revival church
Sterling Cotton Mill	S/127-128	Franklin	Listed/A, C	Circa 1895, two-story, simplified Italianate mill; largest textile operation in Franklin County
Cedar Creek Railroad Bridge Piers	S/129	Franklin	Eligible/A, C	Circa 1840 railroad piers, illustrate the design, material, and method of construction employed in building before the Civil War
Youngsville Historic District	T/132	Franklin	Eligible/A, C	Circa 1890, tobacco market; common commercial and residential building types of the period; stone veneered and several fine, Queen Anne residences
J. B. Perry House	T/132	Franklin	Eligible/C	Circa 1900, Queen Anne residence
Glen Royall Mill Village Historic District*	U/135	Wake	Listed/A, C	Circa 1900, village that provided housing for workers at the Royall Cotton Mill; district includes a company commissary, additional stores, churches, and schools

Table 5-3 Historic Architectures Resources in the SEHSR Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Wake Forest Historic District*	U/135-136	Wake	Listed/A, C	Original campus of Wake Forest College circa 1820-1890; oldest denominational college in NC; Colonial Revival buildings, Greek Revival, Italianate, Queen Anne, and Classical Revival residences
Downtown Wake Forest Historic District	U/136	Wake	Listed/A	Epitomizes the small, rail-oriented business districts circa 1820-1890; Colonial Revival, Moderne, and Art Deco elements
Powell House	U/139-140	Wake	Listed/A, C	Circa 1790, centerpiece of a large plantation; one of the most imposing and earliest dwellings remaining in Wake County
Neuse Railroad Station	U/142	Wake	Eligible/A, C	Circa 1900 station, typical of the period railway stations
Crabtree Creek Railroad Bridge Pier	V/148	Wake	Eligible/A, C	Circa 1840 railroad pier; illustrates the design, material, and method of construction employed in building before the Civil War
Raleigh Bonded Warehouse	V/148-149	Wake	Listed/A, C	Built 1923, cotton warehouse with a million cubic feet of storage space strategically located between the cotton growers of the Coastal Plain and the textile mills in the Piedmont
Mordecai Place Historic District	V/148-149	Wake	Listed/A, C	Circa 1916, subdivision of the plantations that once encircled Raleigh; variety of revival style dwellings, bungalows, and minimal traditional domestic designs
Pilot Mill*	V/149	Wake	Listed/A, C	Built 1892, illustrates the emergence of the Piedmont textile industry; example of the simple, brick buildings with long, rectangular plans and limited ornamentation

Table 5-3 Historic Architectures Resources in the SEHSR Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Roanoke Park Historic District	V/149	Wake	Listed/A, C	Circa 1913-1926, residential neighborhood; Colonial Revival, American Foursquare, Dutch Colonial, Tudor Revival, Minimal Traditional, Period Cottage, and ranch residences
Noland Plumbing Company Building	V/149	Wake	Eligible/A, C	Built 1960, represents wholesale distribution companies during the postwar years when suppliers built facilities near customers in the new subdivisions; illustrates the postwar modernist movement
John A. Edwards and Company Building	V/149	Wake	Eligible/C	Built 1960, example of postwar commercial modernism
Glenwood-Brooklyn Historic District	V/149	Wake	Listed/A, C	Circa 1905, first of a series of suburban neighborhoods; Queen Anne, Craftsman, Tudor Revival, and Colonial Revival style residences
Seaboard Railway Station	V/149	Wake	Eligible/A, C	Built 1942, Colonial Revival railroad station; represents the important role of rail transportation
Seaboard Railway Warehouses	V/149	Wake	Eligible/A, C	Circa 1940, represents the important role of rail transportation; representative of planned warehousing
Raleigh Cotton Mills*	V/149	Wake	Eligible/A, C	Circa 1890, illustrates the rise of the textile industry; typifies the small-scale textile mills of the period
Pine State Creamery*	V/150	Wake	Listed/A, C	Built 1928, dairy farmers' cooperative; Art Moderne building
Melrose Knitting Mill	V/150	Wake	Eligible/A, C	Built 1902, illustrates the rise of rail-oriented manufacturing; typifies the small-scale textile mills of the period
Raleigh Electric Company Power House*	V/150	Wake	Listed/A	Built 1910 primarily to power the city's electric streetcar system

Table 5-3 Historic Architectures Resources in the SEHSR Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Carolina Power and Light Company Car Barn and Automobile Garage*	V/150	Wake	Listed/A, C	Built 1925, housed and repaired the company's streetcars and service vehicles; Art Deco style garage
National Art Interiors	V/150	Wake	Eligible/C	Built 1915, large, intact example of early twentieth century commercial architecture dating from a period of extensive growth out from Raleigh's center toward the new streetcar suburbs
North Carolina School Book Depository	V/151	Wake	Eligible/A	Circa 1940, exemplifies the auxiliary buildings erected to serve the expanding statewide public school system
Raleigh Hosiery Company Building	V/151	Wake	Eligible/A	Circa 1900,illustrates the small-scale industrial and warehousing properties built along the rail lines
Boylan Heights Historic District*	V/150-151	Wake	Listed/A, B, C	Circa 1907, Colonial Revival, Neo-Classical Revival, and picturesque dwellings; exemplifies early twentieth century suburban development; associations with developers and civic leaders, Frank Ellington and J. Stanhope Wynne
Depot Historic District	V/150	Wake	Listed/A, C	Circa 1880-1952, illustrates the transformation of a downtown neighborhood into a specialized industrial zone and transportation center; area comprises Raleigh's only important collection of rail-related, industrial, and warehouse buildings
Raleigh and Gaston Railroad Corridor	M-V/29	Franklin, Warren, Vance, Wake	Eligible/A	Circa 1836-1840, one of the state's first two railroads and grew to become one of the major rail lines in the southeastern United States

Source: *Mattson, Alexander, and Associates, 2005, 2007, 2009.*

* Also a locally-designated historic site.

5.4 Description of the 4(f) Resources – Battlefields

Section 3.12.2.2 of the DEIS describes the battlefields within the APE of the SEHSR project that were determined to be eligible for listing in the NRHP. The 10 battlefields eligible for protection under Section 4(f) are described in Table 5-4. The battlefields are listed in the order they appear in the project study area from north to south.

As discussed in Section 3.12.2.2, the American Battlefield Protection Program (ABPP) proposed new National Register-eligible boundaries for the 10 battlefields within the project APE in July 2009. Although there are differences between the individual VDHR and ABPP battlefield boundaries, when considered in total, the two sets of boundaries almost completely overlap within the project APE.

Table 5-4 Battlefields in the SEHSR Corridor – Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Proctor's Creek	AA, BB/7-10	Chesterfield	Eligible/A	The battlefield consists of monuments, interpretive markers, a cemetery, historic road bed, buildings and trenches
Port Walthall Junction	BB/14-16	Chesterfield	Eligible/A	Area associated with the Battle at Port Walthall Junction; consists of a historic road bed, trenches, and an old railroad bed
Swift Creek/Arrowfield Church	CC/16-18	Chesterfield, Colonial Heights	Eligible/A	Area associated with the Battle at Swift Creek
Petersburg III/The Breakthrough	CC, DD/25-28	Dinwiddie, Petersburg	Eligible/A	Area associated with the Battle of Petersburg
Weldon Railroad/Globe Tavern	CC, DD/26-30	Dinwiddie, Petersburg	Eligible/A	Area associated with the Civil War battles fought near the Weldon Railroad
Peebles Farm	CC, DD/27, 31-33	Dinwiddie, Petersburg	Eligible/A	Location of the Battle of Peebles Farm
Boydton Plank Road	DD, A/32-37	Dinwiddie	Eligible/A	Location of the Battle of Boydton Plank Road
Hatcher's Run	DD, A/31-36	Dinwiddie	Eligible/A	Area associated with the Battle near Hatcher's Run
Lewis Farm	A/36-38	Dinwiddie	Eligible/A	Location of an episode in the initial phase of Grant's final drive to outflank Lee's Petersburg force
Dinwiddie Courthouse	B/40-41	Dinwiddie	Eligible/A	Location of the Battle at Dinwiddie Courthouse

Source: Berger, 2005; Dovetail, 2008, 2009b.

5.5 Description of the 4(f) Resources – Archaeology Sites

Per 36 CFR 800.4(b)(2), a phased approach has been developed to determine the eligibility of archaeological sites within the project APE. For this DEIS, Phase I investigations were completed to determine previously recorded archaeological sites and identify additional archaeological resources within the APE. However, testing to determine whether a particular resource is eligible for inclusion in the NRHP is not conducted during Phase I. The results of the Phase I investigation include all known sites listed in or previously determined eligible for the NRHP, as well as resources potentially eligible for the NRHP. For the SEHSR project, these results will be considered in the selection of the preferred alternative.

Phase II investigations to determine the eligibility of archaeological resources will be completed along the preferred alternative. This information will be reported in the FEIS and, where relevant, in the final Section 4(f) evaluation. The NRHP-eligible sites that will be included in the final Section 4(f) evaluation will include only those that warrant preservation in place (i.e., are not considered important solely because of what information they can provide through data recovery). As stated in 23 CFR 774.13(b), "Section 4(f) does not apply to archeological sites where the Administration, after consultation with the SHPO and the ACHP, determines that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. This exception applies both to situations where data recovery is undertaken or where the Administration decides, with agreement of the SHPO and, where applicable, the ACHP not to recover the resource."

5.6 Section 4(f) Property Impacts – Parks, Recreation Areas, Wildlife Refuges

The SEHSR project alternatives would require a *de minimis* Section 4(f) use of eight parks, recreation areas, or wildlife refuges as listed in Table 5-5 and described below.

Table 5-5
Section 4(f) Determinations for Parks, Recreation Areas, and Wildlife Refuges

Resource Name	VA1/NC1 Section 4(f) Use	VA2/NC2 Section 4(f) Use	VA3/NC3 Section 4(f) Use
Richmond Canal Walk	No Use	No Use	No Use
James River Park System – Slave Trail	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*
Thomas B. Smith Community Center	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*
Chester Kiwanis Historical Park (Planned)	No Use	No Use	No Use
Ettrick Park & Mayes-Colbert Ettrick Community Building	No Use	No Use	No Use
Appomattox Riverfront Trail (Planned)	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*
Upper Appomattox Canal Trail	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*

Table 5-5 Section 4(f) Determinations for Parks, Recreation Areas, and Wildlife Refuges			
Resource Name	**VA1/NC1 Section 4(f) Use**	**VA2/NC2 Section 4(f) Use**	**VA3/NC3 Section 4(f) Use**
Petersburg National Battlefield (Fort Wadsworth Unit)	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*
Tobacco Heritage Trail	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*
Centennial Park	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*
Franklinton Elementary School	No Use	No Use	No Use
Middle Crabtree Creek Greenway	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*

5.6.1 Richmond Canal Walk (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would construct a new rail bridge over the James River, immediately adjacent to the existing rail bridge located between the South 14th Street and I-95 roadway bridges (Appendix Q, mapsheet 1). No ROW from the Canal Walk would be required. The existing rail lines in this area have daily freight and passenger rail traffic that can be heard and seen from the walkway. The addition of SEHSR should not alter the character, setting, or use of the Canal Walk. Therefore, the SEHSR project would have no effect on this resource and would not constitute a Section 4(f) use of the resource.

5.6.2 James River Park System – Slave Trail (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would construct a new rail bridge over the James River, immediately adjacent to the existing rail bridge located between the South 14th Street and I-95 roadway bridges (Appendix Q, mapsheet 1). A small amount of ROW under the span of the bridge is required to allow for access and maintenance. Included in this ROW is approximately 0.03 acres of the Slave Trail within the James River Park System. The existing rail bridge has daily freight rail traffic that can be heard from the trail; therefore, the new bridge should not alter the character, setting, or use of the trail.

The City of Richmond Department of Parks, Recreation, & Community Facilities, as the official with jurisdiction over the Slave Trail, concurred in a letter dated May 7, 2009, that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). Therefore, FRA has made a *de minimis* determination for this resource.

5.6.3 Thomas B. Smith Community Center (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would provide a railroad bridge over Ruffin Road just west of the Thomas B. Smith Community Center and Park (Appendix Q, mapsheet 4). This bridge would ensure the safety of automobiles crossing the SEHSR corridor. Due to the need to lower Ruffin Road to accommodate the bridge, a small

amount of ROW is needed in southwest corner of the Thomas B. Smith Community Center and Park. The ROW is approximately 0.07 acres along Ruffin Road adjacent to the community center. Automobile access to the community center would be maintained. The existing rail crossing has daily freight rail traffic that can be heard from the community center and park; therefore, the new bridge should not alter its character or setting.

The City of Richmond Department of Parks, Recreation, & Community Facilities, as the official with jurisdiction over the Thomas B. Smith Community Center, concurred in a letter dated January 8, 2010, that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). Therefore, FRA has made a *de minimis* determination for this resource.

5.6.4 Chester Kiwanis Historical Park (Planned) (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would require ROW from the parcel along Curtis Street and Richmond Street planned for the Chester Kiwanis Historical Park (Appendix Q, mapsheet 12). However, Chesterfield County made the acceptance of the donated land conditional upon reserving the necessary ROW for the SEHSR project (100 feet from the centerlines of both Curtis Street and Richmond Street) for non-park uses. Therefore, the SEHSR project would have no effect on this resource and would not constitute a Section 4(f) use of the resource.

5.6.5 Ettrick Park & Mayes-Colbert Ettrick Community Building (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) are on common alignment along the park boundary, which is immediately adjacent to the existing railroad ROW (Appendix Q, mapsheet 20). None of the proposed project alternatives would require any ROW from the park. The existing rail line has daily freight and passenger rail traffic that can be heard and seen from the park and community center. The addition of SEHSR should not alter the character, setting, or use of the park. Therefore, the SEHSR project would have no effect on this resource and would not constitute a Section 4(f) use of the resource.

5.6.6 Appomattox Riverfront Trail (Planned) (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would construct a new rail bridge over the Appomattox River, immediately adjacent to the existing rail bridge near Virginia State University (Appendix Q, mapsheet 24). The bridge would be located just to the east of the existing bridge and would require a small amount of ROW under the span of the bridge to allow for access and maintenance. In addition, it may be necessary to provide Virginia State University with an access drive under the bridge. Included in the ROW needed for the SEHSR project is approximately 0.8 acres of the planned Appomattox Riverfront Trail. The existing rail bridge has daily freight and passenger rail traffic that can be heard from the surrounding area; therefore, the new bridge should not alter the character, setting, or use of the planned trail.

The Chesterfield County Department of Parks and Recreation, as the official with jurisdiction over the planned Appomattox Riverfront Trail, in a correspondence dated January 5, 2010, concurred that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f), with the stipulation that the

SEHSR not impede access for pedestrians and bicyclists to traverse the full length of the trail without interruption at the railroad bridge. Therefore, FRA has made a *de minimis* determination for this resource.

5.6.7 Upper Appomattox Canal Trail (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would construct a new rail bridge over the Appomattox River, immediately adjacent to the existing rail bridge near Virginia State University (Appendix Q, mapsheet 24). A small amount of ROW under the span of the bridge is required to allow for access and maintenance. Included in this ROW is approximately 0.1 acres of the Upper Appomattox Canal Trail associated with Appomattox Riverside Park. The existing rail bridge has daily freight and passenger rail traffic that can be heard from the trail; therefore, the new bridge should not alter the character, setting, or use of the trail.

The SEHSR project team sent a letter to the City of Petersburg Department of Parks and Leisure Services, as the official with jurisdiction over the Upper Appomattox Canal Trail, on April 22, 2009, outlining the proposed project alternatives in the vicinity of the Upper Appomattox Canal Trail and stating that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). No response has been received at the time of publication of this DEIS. Therefore, FRA has made a *de minimis* determination for this resource.

5.6.8 Petersburg National Battlefield (Fort Wadsworth Unit) (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would require obtaining approximately 30 feet of ROW (subject to final design) along the western portion of the Fort Wadsworth Unit of Petersburg National Battlefield (Appendix Q, mapsheet 28). This ROW is immediately adjacent to the existing railroad ROW at Collier rail yard. The ROW is needed for the additional track necessary to accommodate the high speed trains associated with the SEHSR project.

The National Park Service Petersburg National Battlefield superintendent, as the official with jurisdiction over the Fort Wadsworth Unit, stated in a letter dated March 4, 2009, that the project could mitigate potential adverse effects to the Fort Wadsworth Unit with a land exchange. Based on the land exchange, the ROW required by the SEHSR project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). Therefore, FRA has made a *de minimis* determination for this resource.

5.6.9 Tobacco Heritage Trail (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would cross the Tobacco Heritage Trail in the Towns of Alberta and La Crosse, VA (Appendix Q, mapsheets 66 and 83, respectively). In Alberta, VA, the project would provide a pedestrian/non-motorized overpass of the proposed rail alignment. In addition, the realignment of Second Avenue, which is necessary to provide a vehicle bridge over the proposed rail alignment, would require ROW from the trail. In La Crosse, VA, the project would re-route the Tobacco Heritage Trail north along Main Street approximately 300 feet, where it would then cross under the proposed rail alignment, and rejoin the existing rails-to-trails corridor. The SEHSR

project team worked with representatives from both towns and the RRRT in the development of the designs to ensure that the project would not impede the development or planned use of the trail.

The RRRT and the Towns of Alberta and La Crosse, VA, as the officials with jurisdiction over the Tobacco Heritage Trail, concurred in letters dated May 20, 2009 (RRRT), September 22, 2009 (Alberta, VA), and April 27, 2009 (La Crosse, VA), that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). Therefore, FRA has made a *de minimis* determination for this resource.

The RRRT included in their concurrence the following stipulations:

- The pedestrian/non-motorized overpass of the proposed rail alignment in Alberta, VA, must accommodate all forms of non-motorized traffic, including equestrian use
- The overpass in Alberta, VA, must be of sufficient width and construction to accommodate maintenance vehicles
- A pedestrian/non-motorized route must be provided adjacent to the Second Avenue realignment in Alberta, VA
- The re-routed trail in La Crosse, VA, should re-connect to the Tobacco Heritage Trail in a location that provides the safest and best accommodation
- The underpass in La Crosse, VA, must accommodate all forms of non-motorized traffic, including equestrian use
- The underpass in La Crosse, VA, must be of sufficient width and construction to accommodate maintenance vehicles

5.6.10 Centennial Park (VA)

All three of the proposed project alternatives (VA1, VA2, and VA3) would close the existing pedestrian crossing just east of Centennial Park and require a small amount of ROW (approximately 0.06 acres) to accommodate the railroad improvements (Appendix Q, mapsheet 82). The project would provide a new pedestrian underpass along the Tobacco Heritage Trail, approximately 300 feet to the north along Main Street, which would allow trail users to cross under the proposed rail alignment and rejoin the existing rails-to-trails corridor. Although the new rail traffic would be heard from the park, it is in character with its rail theme; therefore, the required ROW should not alter the character, setting, or use of the park.

The Town of La Crosse, as the official with jurisdiction over Centennial Park, concurred in a letter dated September 30, 2009, that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). Therefore, FRA has made a *de minimis* determination for this resource.

5.6.11 Franklinton Elementary School (NC)

All three of the proposed project alternatives (NC1, NC2, and NC3) would require ROW in the vicinity of the Franklinton Elementary School to provide pedestrian access from Hawkins Street, under the railroad tracks, to South Main Street (Appendix Q, mapsheet 128). However, no land would be required from the school and the pedestrian access would have no effect on the use of its facilities. Therefore, the SEHSR project is anticipated to have no effect on this resource and would not constitute a Section 4(f) use of the resource.

5.6.12 Middle Crabtree Creek Greenway (NC)

All three of the proposed project alternatives (NC1, NC2, and NC3) would construct a new single track bridge adjacent to the existing rail bridge that spans Crabtree Creek and Hodges Street in Raleigh, NC (Appendix Q, mapsheet 148). The new rail bridge would provide an additional track that is necessary to accommodate the high speed trains associated with the SEHSR project. A small amount of ROW under the span of the bridge is required to allow for access and maintenance. Included in this ROW is approximately 0.15 acres of the City of Raleigh's Middle Crabtree Creek Greenway. The existing rail bridge has daily freight and passenger rail traffic that can be heard from the trail; therefore, the new bridge should not alter the character, setting, or use of the trail.

The City of Raleigh Parks and Recreation Department, as the official agency with jurisdiction over the Middle Crabtree Creek Greenway, concurred on September 11, 2009, that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f), with the stipulation that continuous operation of the greenway trail during construction would need to be addressed. Therefore, FRA has made a *de minimis* determination for this resource.

5.7 Section 4(f) Property Impacts – Historic Architecture Sites

Of the 105 historic architecture resources (excluding battlefields) determined to be eligible for listing or listed in the NRHP within the project corridor, 59 would have property impacts or proximity impacts from one or more of the project alternatives (Tables 5-6 and 5-7). None of the project alternatives would have an effect on the remaining 46 resources under Section 106 of the National Historic Preservation Act (NHPA) nor would they require the acquisition of any ROW from any of these properties. There is no 4(f) use of these properties; therefore, no further action is required for these resources.

Where one or more of the project alternatives has been determined to affect a Section 4(f) resource (either no adverse effect or adverse effect under Section 106 of the NHPA or ROW required), details are provided below regarding each alternative's impact on the resource. Tables 5-6 and 5-7, as well as the discussion below, identify where FRA has determined that impacts are *de minimis* or do not constitute a Section 4(f) use. Resources in Tables 5-6 through 5-7 are ordered from north to south as they appear in the SEHSR study corridor.

It should be noted that effects for resources in Virginia are described as "recommended" effects. This is because final determination of effects for resources in Virginia will be completed after all archaeological surveys and effect determinations have been completed (i.e., after selection of the preferred alternative) and will be reported in the FEIS. The recommended effects were presented by the SEHSR project team to VDHR for concurrence,

which was granted in a letter dated November 23, 2009. Concurrence with *de minimis* findings in Virginia will be obtained after final determinations of effect.

The North Carolina State HPO concurred with the determinations of effect for resources in North Carolina in a form signed December 23, 3009. This form included concurrence with *de minimis* findings.

Impacts to the 10 historic battlefields are discussed separately in Section 5.8.

Table 5-6
Section 4(f) Determinations for Historic Architecture Resources - Virginia

Resource Name	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use
Seaboard Air Line Railroad Corridor	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
C. & O. & Seaboard Railroad Depot	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
Shockoe Valley & Tobacco Row Historic District	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
Shockoe Slip Historic District	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
James River and Kanawha Canal Historic District	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
Atlantic Coast Line Railroad Corridor	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Manchester Warehouse Historic District	No Effect/ Use, *De Minimis*	No Effect/ Use, *De Minimis*	No Effect/ Use, *De Minimis*
Williams Bridge Company	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Lucky Strike/RJ Reynolds Tobacco	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Transmontaigne Product Services, Inc.	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Davee Gardens Historic District	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Dupont Spruance	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Sheffields; Auburn Chase; Bellwood; Building 42 - DSCR Officer's Club; New Oxford	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
USDOD Supply Center Historic District; Bellwood-Richmond Quartermaster Depot Historic District	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use

Table 5-6 Section 4(f) Determinations for Historic Architecture Resources - Virginia			
Resource Name	**VA1 Section 106 Effect/ Section 4(f) Use**	**VA2 Section 106 Effect/ Section 4(f) Use**	**VA3 Section 106 Effect/ Section 4(f) Use**
Richmond & Petersburg Electric Railway	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
House at 3619 Thurston Rd	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Centralia Post Office	Adverse Effect/ No Use	Adverse Effect/ No Use	Adverse Effect/ No Use
Ragland House/4626 Centralia Road	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
Circle Oaks/4510 Centralia Road	Adverse Effect/ No Use	Adverse Effect/ No Use	Adverse Effect/ No Use
Chester Historic District	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Chester #94 Masonic Lodge	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Pretlow House	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Eichelberger House	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Ellerslie	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Battersea	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
North Battersea/Pride's Field Historic District	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Defense Road	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Dimmock Line/Earthworks	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Bridge over Defense Road	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Evergreen	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Courtworth	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Bowen House	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
W. Boisseau's Store, Warehouse, Dwelling	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use

Table 5-6 Section 4(f) Determinations for Historic Architecture Resources - Virginia			
Resource Name	**VA1 Section 106 Effect/ Section 4(f) Use**	**VA2 Section 106 Effect/ Section 4(f) Use**	**VA3 Section 106 Effect/ Section 4(f) Use**
Bank Building	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Mayton House	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Honeymoon Hill Farm	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Wynnhurst	Adverse Effect/ Use	No Effect/ No Use	Adverse Effect/ Use
Blick's Store	No Effect/ No Use	No Adverse Effect/ Use, *De Minimis*	No Effect/ No Use
Tourist Guest House	No Effect/ No Use	No Effect/ No Use	Adverse Effect/ Use
Oak Shades	Adverse Effect/ Use	No Adverse Effect/ Use, *De Minimis*	No Effect/ No Use
Evans House	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Smelley House	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
La Crosse Commercial Historic District	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Wright Farmstead	Adverse Effect/ Use	No Effect/ No Use	Adverse Effect/ Use
Sardis Methodist Church	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
Bracey Historic District	No Effect/ No Use	Adverse Effect/ Use	No Effect/ No Use
Granite Hall/Fitts House	No Effect/ No Use	Adverse Effect/ Use	No Effect/ No Use

Table 5-7 Section 4(f) Determinations for Historic Architecture Resources – North Carolina			
Resource Name	**NC1 Section 106 Effect/ Section 4(f) Use**	**NC2 Section 106 Effect/ Section 4(f) Use**	**NC3 Section 106 Effect/ Section 4(f) Use**
Warren County Training School	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Wise School	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
House (East side of US 1, Wise, NC)	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use

Table 5-7 Section 4(f) Determinations for Historic Architecture Resources – North Carolina			
Resource Name	**NC1 Section 106 Effect/ Section 4(f) Use**	**NC2 Section 106 Effect/ Section 4(f) Use**	**NC3 Section 106 Effect/ Section 4(f) Use**
Holtzmann Farm	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Chapel of the Good Shepherd	Adverse Effect/ No Use	Adverse Effect/ No Use	Adverse Effect/ No Use
Dr. Thomas B. Williams House and Office	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
William J. Hawkins House	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Middleburg Community House (Middleburg Steakhouse)	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
House (Allison Cooper Rd, Middleburg vicinity)	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Holloway Farm	Adverse Effect/ Use	Adverse Effect/ Use	No Effect/ No Use
William Haywood Harris Farm	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Forrest Ellington Farm	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
R. B. Carter House	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Henderson Historic District and Proposed Boundary Expansion	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Houses (2 bungalows on E Young Ave)	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Mistletoe Villa	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
South Henderson Industrial Historic District	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Vance Flour Mill (Sanford Milling Co.)	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Houses (5 worker houses on 1400 block of Nicholas St)	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Houses (3 side gable houses on 1500 block of Nicholas St)	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Esso Gasoline Station	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Confederate Cemetery	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use

Table 5-7 Section 4(f) Determinations for Historic Architecture Resources – North Carolina			
Resource Name	**NC1 Section 106 Effect/ Section 4(f) Use**	**NC2 Section 106 Effect/ Section 4(f) Use**	**NC3 Section 106 Effect/ Section 4(f) Use**
Saint James Episcopal Church	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Hedgepetch and Finch Store	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Person-McGhee Farm	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Raleigh and Gaston Railroad Bridge Piers (Tar River)	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Franklinton Historic District (Includes Sterling Mill Historic District)	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use
Church (within proposed Franklinton Historic District)	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Sterling Cotton Mill	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Cedar Creek Railroad Bridge Piers	No Adverse Effect/No Use	No Adverse Effect/No Use	No Adverse Effect/No Use
Youngsville Historic District	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
J. B. Perry House	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Glen Royall Mill Village Historic District	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
Wake Forest Historic District	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Downtown Wake Forest Historic District	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Powell House	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Neuse Railroad Station	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Crabtree Creek Railroad Bridge Pier	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Raleigh Bonded Warehouse	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Mordecai Place Historic District	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Pilot Mill	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Roanoke Park Historic District	No Effect/ No Use	No Effect/ No Use	Adverse Effect/ Use

Table 5-7 Section 4(f) Determinations for Historic Architecture Resources – North Carolina			
Resource Name	**NC1 Section 106 Effect/ Section 4(f) Use**	**NC2 Section 106 Effect/ Section 4(f) Use**	**NC3 Section 106 Effect/ Section 4(f) Use**
Noland Plumbing Company Building	No Effect/ No Use	No Effect/ No Use	No Adverse Effect/ Use, *De Minimis*
John A. Edwards and Company Building	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Glenwood-Brooklyn Historic District	No Effect/ No Use	No Effect/ No Use	No Adverse Effect/ Use, *De Minimis*
Seaboard Railway Station	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Effect/ No Use
Seaboard Railway Warehouses	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Effect/ No Use
Raleigh Cotton Mills	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Effect/ No Use
Pine State Creamery	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Melrose Knitting Mill	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Raleigh Electric Company Power House	Adverse Effect/ Use	Adverse Effect/ Use	No Effect/ No Use
Carolina Power and Light Company Car Barn and Automobile Garage	Adverse Effect/ Use	Adverse Effect/ Use	No Effect/ No Use
National Art Interiors	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use
North Carolina School Book Depository	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Raleigh Hosiery Co. Building	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Boylan Heights Historic District	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Depot Historic District	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use
Raleigh and Gaston Railroad Corridor	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use

5.7.1 Seaboard Air Line Railroad Corridor (VA)

The three SEHSR project alternatives are on common alignment in the vicinity of the Seaboard Line Railroad Corridor. The project alternatives would require a use of the resource in order to add a second set of tracks. However, this would return most of the corridor to its original historic appearance and configuration. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource

under Section 106 of the NHPA. FRA has determined that the Section 4(f) impacts from all three project alternatives are *de minimis*.

5.7.2 C. & O. & Seaboard Railroad Depot (VA)

The three SEHSR project alternatives are on common alignment in the vicinity of the C. & O. & Seaboard Railroad Depot. The project alternatives would add a second set of tracks. However, they would not require any modifications to the existing building or the surrounding tracks and would not alter the property's location, design, setting, materials, workmanship, feeling, or association. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the district; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.3 Shockoe Valley & Tobacco Row Historic District (VA)

The three SEHSR project alternatives are on common alignment in the vicinity of this district. The project alternatives would add a second set of tracks. However, all work would be between one and three stories above the historic district atop existing support and the addition of the second track would not alter the physical composition or viewshed of the district in any way. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this district under Section 106 of the NHPA. The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the district; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.4 Shockoe Slip Historic District (VA)

The three SEHSR project alternatives are on common alignment in the vicinity of this district. The project alternatives would add a second set of tracks. However, all work would be between one and three stories above the historic district atop existing support and the addition of the second track would not alter the physical composition or viewshed of the district in any way. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this district under Section 106 of the NHPA. The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the district; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.5 James River and Kanawha Canal Historic District (VA)

The three SEHSR project alternatives are on common alignment in the vicinity of this district. The project alternatives would add a second set of tracks. However, the modifications would not impact the integrity of any aspects of this district, and the addition of the second track on the existing pier would not alter the district's significance or character. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this district under Section 106 of the NHPA. The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the district; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.6 Atlantic Coast Line Railroad Corridor (VA)

The three SEHSR project alternatives are on common alignment in the vicinity of the Atlantic Coast Line Railroad Corridor. The project alternatives would require a use of the resource in order to add a second set of tracks. However, this would return most of the corridor to its original historic appearance and configuration. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.7 Manchester Warehouse Historic District (VA)

The three SEHSR project alternatives are on common alignment in the vicinity of this district. The project alternatives would require a use of the resource in order to add a second set of tracks. However, alterations to the rail corridor itself would be minimal and road work in this area would primarily comprise modifications to change the intersection of Maury Street and the CSX rail tracks from an at-grade crossing to a bridged crossing. The road change would not diminish the district's location, setting, materials, workmanship, feeling or association. It is recommended that the VA1, VA2, and VA3 project alternatives would have no effect on this district under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.8 Williams Bridge Company (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource to add a second set of tracks and to reroute the entry and roadways near this complex. This has the potential to diminish the property's integrity of location, design, setting, feeling, and association. It is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.9 Transmontaigne Product Services, Inc. (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks and provide an underpass of Goodes Street. However, a retaining wall would be constructed on the north side of Goodes Street to eliminate any modifications to this historic property and the viewshed would not be modified. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.10 Davee Gardens Historic District (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks and widen a 2,300-foot long stretch of Ruffin Road, which is located along the northern perimeter of the district. The modifications would not alter any of the characteristics that render this district eligible for the NRHP. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the

NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.11 Dupont Spruance (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks. Although the project has the potential to slightly alter the setting of the resource, it would not diminish the characteristics that make this property eligible for the NRHP. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.12 Richmond & Petersburg Electric Railway (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.13 House at 3619 Thurston Rd (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to provide a new roadway about 250 feet west of the dwelling. The house would be separated from the road ROW by a modern home and a vegetative buffer and would not alter the resource's location, design, materials, workmanship, and feeling. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this property under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.14 Centralia Post Office (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would construct an overpass on Centralia Road. The fill slope from the bridge would be approximately 30 feet tall and located less than 30 feet south of the resource and its driveway would be moved. It is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on this resource under Section 106 of the NHPA.

Although the SEHSR project would have an adverse effect on the Centralia Post Office under Section 106, the project would not require any ROW from the resource. A visualization (i.e., computer-generated "before and after" images) of the view from the Centralia Post Office was prepared to convey the visual impact of the project alternatives (Appendix L). These images were shared with the property owner, who responded positively about the proposed change to the viewshed. Based on the visual change anticipated and communications with the property owner, the FRA has determined that the proximity impacts do not cause a substantial impairment to the Centralia Post Office.

Therefore, the impacts do not constitute a Section 4(f) use of the resource and the resource is not included in the remainder of the Section 4(f) evaluation.

5.7.15 Ragland House/4626 Centralia Rd (VA)

The three SEHSR project alternatives are on common alignment near the Ragland House. The project alternatives would construct an overpass on Centralia Road and a portion of Centralia Road would be rerouted just east of Ragland House. However, no roadwork would be completed on the Ragland property, and the viewshed from the main house would be only slightly modified as the new road meets the old road southeast of the house. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Ragland House; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.16 Circle Oaks/4510 Centralia Road (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would construct an overpass on Centralia Road. The approach to the bridge would be visible from Circle Oaks and would require reconfiguring a section of driveway. The modifications have the potential to diminish the characteristics that make the property eligible for the NRHP. It is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on this resource under Section 106 of the NHPA.

Although the SEHSR project would have an adverse effect on Circle Oaks under Section 106, the project would not require any ROW from the resource. A visualization (i.e., computer-generated “before and after” images) of the view from the front porch of Circle Oaks was prepared to convey the visual impact of the project alternatives (Appendix L). These images were shared with the property owner, who did not express concerns about the proposed change to the viewshed. Based on the visual change anticipated and communications with the property owner, the FRA has determined that the proximity impacts do not cause a substantial impairment to Circle Oaks. Therefore, the impacts do not constitute a Section 4(f) use of the resource and the resource is not included in the remainder of the Section 4(f) evaluation.

5.7.17 Chester Historic District (VA)

The three SEHSR project alternatives are on common alignment through the Chester Historic District. The project alternatives would require a use of the resource in order to add a second set of tracks, reroute several original road alignments, and close at-grade rail crossings. The project alternatives would result in notable modifications to the district’s original plan. It is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on this district under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.18 Pretlow House (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to accommodate

modifications to Curtis Street between the rail tracks and Winfree Street. At Pretlow House, the road changes have been minimized through the creation of curb and gutter designs, thus avoiding impacts to vegetation currently in existence at the corner of the property and avoiding any impacts to the existing store wall. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. As a condition of this effect recommendation, the VDHR requested that all efforts be made during construction to avoid impacts to the existing stone wall and adjacent vegetation. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.19 Eichelberger House (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks and widen Curtis Street as part of the new railroad underpass. This would require the removal of the original stone gate and part of the trail to the Eichelberger House. Both of these resources are contributing elements to the larger Eichelberger House property. It is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on this property under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.20 Battersea (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks. However, the main house and all above-ground resources are shielded from the rail corridor by distance (the closest above-ground contributing element is over 750 feet from the rail track and the main house is 1,200 feet from the tracks), topography, and dense vegetation. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this property under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.21 North Battersea/Pride's Field Historic District (VA)

The three SEHSR project alternatives are on common alignment near this district. The project alternatives would require a use of the resource in order to add a second set of tracks in the vicinity of Battersea mansion (a contributing element to the district). With the exception of Battersea, the closest contributing element to the rail corridor is over 2,000 feet east of the rail line and the project alternatives would not impact the physical or historic integrity of the resource. It is suggested that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this district under Section 106 of the NHPA. As a condition of this effect recommendation, the VDHR requested that the project team coordinate with the City of Petersburg to identify measures to minimize impacts to this resource. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.22 Defense Road (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second railroad bridge over Defense Road (directly adjacent to the existing railroad bridge), which would necessitate the removal of a small section of the original roadway and lowering the overall

road grade near the bridge to allow for vehicular passage beneath the new span. This change would impact the road's location, design, setting, materials, workmanship, and feeling. It is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.23 Dimmock Line/Earthworks (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second railroad bridge over Defense Road (directly adjacent to the existing railroad bridge). Construction of the bridge and associated improvements to Defense Road would necessitate large disturbances to the segment of the earthworks within the project APE. It is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on the resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.24 Bridge over Defense Road (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second bridge directly east of the existing span, thus introducing a new element adjacent to the current bridge. Due to the introduction of this large new element, it is recommended that the VA1, VA2, and VA3 project alternatives would have an adverse effect on the resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.25 Bowen House (VA)

The three SEHSR project alternatives are on common alignment near this resource, which is on the east side of US 1. The project alternatives would add a set of tracks within the existing rail corridor on the west side of US 1. The rail corridor is approximately 75 feet west of the western boundary of this resource and over 150 feet from the main house. However, the road system in this area would also be modified by rerouting the corridor to the south of the Bowen House and bridging Glebe Road over the rail lines. This new bridge would be just southwest of the Bowen House boundaries. It is possible that the new structure would be visible from the main house. However, any modifications to the viewshed would be tempered by a vegetative screen, distance, and the US 1 corridor. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Bowen House; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.26 Wynnhurst (VA)

The proposed SEHSR project alternatives vary near this resource. The VA1 and VA3 alternatives are on common alignment and require a use of the resource in order to add a second set of tracks. This alternative runs through the southeastern half of the Wynnhurst property; the new rail corridor is 100 feet from the main house and entirely within the larger property boundaries. Due to alterations to the property's location, design, setting, feeling, and association, it is recommended that the VA1/VA3 project alternative would have an

adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

The VA2 alternative veers off to the northwest of Wynnhurst, running through the small community of Rawlings, VA. It is recommended that the VA2 project alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.27 Blick's Store (VA)

The proposed SEHSR project alternatives vary near this resource. All project alternatives would rebuild the railroad tracks through this area in the existing corridor.

The VA1 and VA3 alternatives are on common alignment. This alternative includes no roadwork in the vicinity of the Blick's Store. The VA1/VA3 project alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

The VA2 project alternatives would require a use of the resource in order to reroute Route 629 behind the property, about 300 feet south of the store building. The road movement would not impact the physical characteristics of the resource. It is recommended that the VA2 project alternative would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impact from the VA2 alternative is *de minimis*.

5.7.28 Tourist Guest House (VA)

The proposed SEHSR project alternatives vary near this resource. The VA1 and VA2 project alternatives are located over 300 feet southeast of the property. It is recommended that the VA1 and VA2 project alternatives would have no effect on this resource under Section 106 of the NHPA; the alternatives would not require a Section 4(f) use.

The VA3 project alternative would require a use of the resource in order to locate the railroad tracks directly behind the main house of the Tourist Guest House. Construction of this new rail line would be within the viewshed of the home. It is recommended that the VA3 project alternative would have an adverse effect on this property under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.29 Oak Shades (VA)

The proposed SEHSR project alternatives vary near this resource. The VA1 project alternative would require a use of the resource in order to relocate the railroad corridor on new location just southeast of the main house at Oak Shades. The new rail corridor would be less than 50 feet from the home. Because of the impacts to the building's physical and historic integrity, it is recommended that the VA1 project alternative would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

The VA2 project alternative would require a use of the resource in order to add a second set of tracks. The rail tracks would be located down a steel escarpment and not visible from the main house. It is recommended that the VA2 project alternative would have no adverse

effect on this resource under Section 106 of the NHPA. FRA has determined that the impact from the VA2 alternative is *de minimis*.

The VA3 project alternative is located over 300 feet from the Oak Shades property. It is recommended that this alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.30 La Crosse Commercial Historic District (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to reestablish rail through town and remodel the road system to remove at-grade railroad crossings. The alternatives would require the demolition of at least two contributing resources. It is recommended that that the VA1, VA2, and VA3 project alternatives would have an adverse effect on this district under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.31 Wright Farmstead (VA)

The proposed SEHSR project alternatives vary near this resource. The VA1 and VA3 project alternatives would require a use of the resource in order to relocate the railroad corridor directly through the western two-thirds of the resource. It is recommended that the VA1/VA3 project alternative would have an adverse effect on this property under Section 106 of the NHPA.

The VA2 project alternative is located more than 500 feet from the Wright Farmstead. It is recommended that the VA2 project alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.32 Sardis Methodist Church (VA)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would reroute the current driveway for the church in order to close an at-grade railroad crossing. Although this change alters the property's setting, it does not diminish any of the characteristics that render the resource eligible for the NRHP. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this resource under Section 106 of the NHPA. The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Sardis Methodist Church; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.33 Bracey Historic District (VA)

The proposed SEHSR project alternatives vary near this resource. The VA1 and VA3 project alternatives share a common alignment and would construct the rail corridor west of the original Seaboard Air Line tracks. It is recommended that the VA1and VA3 project alternatives would have no effect on this district under Section 106 of the NHPA; the alternatives would not require a Section 4(f) use.

The VA2 project alternative would require a use of the resource in order to reestablish rail on the abandoned Seaboard tracks. This would result in construction directly adjacent to

the existing Bracey Railroad Depot, which is a contributing element to the district. Although the depot would not be destroyed, the work has the potential to diminish the district's design, setting, feeling, and association by modifying the original rail corridor and risking impacts to contributing elements. It is recommended that the VA2 project alternative would have an adverse effect on this district under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.34 Granite Hall/Fitts House (VA)

The proposed SEHSR project alternatives vary near this resource. The VA1 and VA3 project alternatives are on common alignment near Granite Hall. The rail alignments are located 700 feet west of Granite Hall and several dwellings, vegetation, and roadways are between the home and the alignments. It is recommended that the VA1and VA3 project alternatives would have no effect on the resource under Section 106 of the NHPA; the alternatives would not require a Section 4(f) use.

The VA2 project alternative runs along the abandoned Seaboard Air Line rail corridor. The alternative would require a use of the resource in order to construct a new bridge on Route 712 over the rail line. The fill slope for the new bridge would be located in front of the main house. This would alter both the driveway and the approach to the home and also introduce a new visual element outside of the primary elevation of the home. Because of impacts to the resource's design, setting, feeling, and association, it is recommended that the VA2 project alternative would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.35 Holtzmann Farm (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to accommodate improvements to St. Tammany Road associated with the new bridge over the railroad. A minor amount of road frontage ROW would be required from the southwest corner of the property directly adjacent to St. Tammany Road. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.36 Chapel of the Good Shepherd (NC)

All three of the proposed SEHSR rail alignments are on common alignment in the vicinity of the Chapel of the Good Shepherd. The project would reroute Ridgeway Warrenton Road from its current location in front of the church to a new location immediately behind the church. In addition, a new service road adjacent to the rail corridor would be located along the northern church property boundary and would tie into the realigned Ridgeway Warrenton Road. Both roads would be at an elevation approximately 10 feet higher than the surrounding ground elevation and may, therefore, be visible from the church. The driveway access for the church would remain unchanged; however, vehicles would approach the church from a different direction. The NC1, NC2, and NC3 alternatives would have an adverse effect on this resource under Section 106 of the NHPA.

Although the SEHSR project would have an adverse effect on the Chapel of the Good Shepherd under Section 106, the project would not require any ROW from the resource. An NCDOT representative spoke with the church pastor on September 15, 2009, regarding the

proposed project and potential mitigation for impacts to the church. Subsequently, a copy of the project designs in the vicinity of the church was provided to the pastor. To date, no comments have been received from the church. Based on an assessment of the impact to the church and the fact that the church has not objected to the project, the FRA has determined that the proximity impacts do not cause a substantial impairment to the Chapel of the Good Shepherd. Therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.37 William J. Hawkins House (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks. In addition, the current driveway access for the property would be relocated. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. This determination is conditional; the SEHSR must coordinate with the property owner about the access issue. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.38 Holloway Farm (NC)

The proposed SEHSR project alternatives vary near this resource. The proposed NC1 and NC2 project alternatives would both require a use of the resource to relocate the railroad corridor and would bisect Holloway Farm. The NC1 and NC2 alternatives would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

The NC3 project alternative is located more than 500 feet east of the resource. The NC3 project alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.39 Forrest Ellington Farm (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to provide a new bridge over the railroad. A minor amount of road frontage ROW from the northwest corner of the property would be required at the intersection of Brookston Road and Carver School Road. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.40 Henderson Historic District and Proposed Boundary Expansion (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to bridge Andrews Avenue (NC Hwy 39) within the Henderson Historic District. A retaining wall is included in the design to minimize impacts to the district from the bridge. However, the retaining wall would require a small amount of ROW be taken from a house along Andrews Avenue and necessitate re-grading a driveway. It would also impact landscaping along Andrews Avenue, potentially removing several trees. The NC1, NC2, and NC3 alternatives would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.41 South Henderson Industrial Historic District (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to bridge Alexander Avenue on new alignment through the South Henderson Industrial Historic District. Currently, Alexander Avenue terminates at Nicholas Street; the proposed alternatives would carry it over the railroad tracks to connect to the Dabney Drive Extension. In order to accommodate the new bridge on Alexander Avenue, the SEHSR alternatives would require the closing of the Nicholas Street intersection with Alexander Avenue. The NC1, NC2, and NC3 alternatives would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.42 Houses (5 worker houses on 1400 block of Nicholas St) (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks. The alternatives would require minor ROW from the resources directly adjacent to the railroad corridor (i.e., from their backyards). The NC1, NC2, and NC3 project alternatives would have no adverse effect on these resources under Section 106 of the NHPA, provided that there is no taking of the structures. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.43 Houses (3 side gable houses on 1500 block of Nicholas St) (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to add a second set of tracks. The alternatives would require minor ROW from the resources directly adjacent to the railroad corridor (i.e., from their backyards). The NC1, NC2, and NC3 project alternatives would have no adverse effect on these resources under Section 106 of the NHPA, provided that there is no taking of the structures. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.44 Franklinton Historic District (Includes Sterling Mill Historic District) (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to eliminate the railroad crossing at Mason Street and replace the railroad bridge at Green Street, which is a contributing element to the historic district. The NC1, NC2, and NC3 alternatives would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.45 Sterling Cotton Mill (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to provide an underpass of the railroad at Green Street, including sidewalks. A minor amount of ROW would be needed for these improvements. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.46 Cedar Creek Railroad Bridge Piers (NC)

The proposed SEHSR project alternatives vary in the vicinity of this resource. The NC1 and NC3 alignments would cross Cedar Creek on a new bridge just to the east of the piers; the NC 2 alignment would cross on a new bridge just to the west of the existing piers. With implementation of any of the three project alternatives, the existing railroad bridge would no longer be used for rail traffic. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. The SHPO's concurrence with this determination is conditional; NCDOT must commit to ensuring the piers are not taken down during the construction of the project.

The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Cedar Creek Railroad Bridge Piers; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.47 Youngsville Historic District (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives bridge Main Street over the railroad in the vicinity of the Youngsville Historic District. In order to accommodate the new bridge, the alternatives would require the removal of several on-street parking spots in front of the Youngsville Community Center within the district. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA.

The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the proposed Youngsville Historic District; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.48 Glen Royall Mill Village Historic District (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives include a pedestrian crossing of the railroad tracks directly adjacent to the district. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. This determination is conditional; the SEHSR must design the pedestrian crossing in a manner that minimizes its opaqueness and fits in with the character of its surroundings.

The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Glen Royall Mill Village Historic District; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.49 Crabtree Creek Railroad Bridge Pier (NC)

The three SEHSR project alternatives are on common alignment near this resource. The project alternatives would require a use of the resource in order to provide a new rail bridge that would accommodate an additional track. The new bridge would span the historic pier and require a small amount of ROW under the span to allow for access and maintenance. This ROW includes the land where the pier is situated; the pier would not be otherwise impacted. The NC1, NC2, and NC3 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. This determination is conditional; the SEHSR

must ensure that the pier is not impacted during construction of the new bridge. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.7.50 Roanoke Park Historic District (NC)

The proposed SEHSR project alternatives vary in the vicinity of this resource. The proposed NC1 and NC2 rail alignments are located across Capital Boulevard from the district. The NC1 and NC2 project alternatives would have no effect on this resource under Section 106 of the NHPA; the alternatives would not require a Section 4(f) use.

The NC3 project alternative would require a use of the resource in order to maintain the operation of the nearby Norfolk Southern railroad yard. The additional ROW would be located directly adjacent to the railroad corridor behind four properties on Bickett Boulevard within the historic district. The necessary ROW would impact the backyards of these properties; in particular, one property would lose approximately 0.15 acres, including a garage. The NC3 alternative would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

5.7.51 Noland Plumbing Company Building (NC)

The proposed SEHSR project alternatives vary in the vicinity of this resource. The proposed NC1 and NC2 rail alignments are located across Capital Boulevard from the resource. The NC1 and NC2 project alternatives would have no effect on this resource under Section 106 of the NHPA; the alternatives would not require a Section 4(f) use.

The NC3 project alternative would require a use of the resource in order to maintain the operation of the nearby Norfolk Southern railroad yard. A small amount of ROW would be required directly adjacent to the railroad corridor along the rear of the Noland Plumbing Company Building property. Two modern storage buildings may be impacted by the additional ROW; neither is a contributing element to the resource. The NC3 project alternative would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impact from the NC3 alternative is *de minimis*.

5.7.52 Glenwood-Brooklyn Historic District (NC)

The proposed SEHSR project alternatives vary in the vicinity of this resource. The proposed NC1 and NC2 rail alignments are located across Capital Boulevard from the district. The NC1 and NC2 project alternatives would have no effect on this resource under Section 106 of the NHPA; the alternatives would not require a Section 4(f) use.

The NC3 project alternative would require a use of the resource in order to maintain the operation of the nearby Norfolk Southern railroad yard. A small amount of ROW would be required from one residence on Adams Street and one residence on Washington Street (from the backyards of the properties). In addition, an easement would be required within the parking lots for several commercial properties along Dale Street and Jefferson Street. These easements are necessary to construct and maintain a retaining wall along the railroad corridor. The NC3 project alternative would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impact from the NC3 alternative is *de minimis*.

5.7.53 Seaboard Railway Station (NC)

The proposed SEHSR project alternatives vary near this resource. The NC1 and NC2 project alternatives may require temporary construction easements from this resource. The NC1 and NC2 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. The NC1 and NC2 project alternatives would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Seaboard Railway Station; therefore, the impacts do not constitute a Section 4(f) use of the resource.

The proposed NC3 rail alignment is located across Capital Boulevard from the resource. The NC3 project alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.54 Seaboard Railway Warehouses (NC)

The proposed SEHSR project alternatives vary near this resource. The NC1 and NC2 project alternatives may require temporary construction easements from this resource. The NC1 and NC2 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. The NC1 and NC2 project alternatives would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Seaboard Railway Station; therefore, the impacts do not constitute a Section 4(f) use of the resource.

The proposed NC3 rail alignment is located across Capital Boulevard from the resource. The NC3 project alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.55 Raleigh Cotton Mills (NC)

The proposed SEHSR project alternatives vary near this resource. The NC1 and NC2 project alternatives would require a use of the resource in order to add a second set of tracks. A small amount of ROW would be required from the resource; however, no buildings would be taken. The NC1 and NC2 alternatives would have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impacts from the NC1 and NC2 alternatives are *de minimis*.

The proposed NC3 rail alignment is located across Capital Boulevard from the resource. The NC3 project alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.56 Raleigh Electric Company Power House (NC)

The proposed SEHSR project alternatives vary near this resource. The NC1 project alternative would require a use of the resource in order to bridge West Jones Street. The bridge would be visible directly in front of the Raleigh Electric Company Power House and a minor amount of ROW would be required from the property (with no impacts to the building itself). The NC1 alternative would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

The NC2 project alternative would be almost identical to the NC1 alternative in the vicinity of the resource, with a minor shift in rail alignment. The NC2 alternative would also require a use of the resource in order to bridge West Jones Street and would have the same visual and property impacts as the NC1 alternative. The NC2 alternative would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

The proposed NC3 rail alignment would close the existing at-grade railroad crossing at West Jones Street. No ROW would be required from the resource. The NC3 alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.57 Carolina Power and Light Company Car Barn and Automobile Garage (NC)

The proposed SEHSR project alternatives vary near this resource. The NC1 project alternative would require a use of the resource in order to bridge West Jones Street. The bridge would be visible directly in front of the Carolina Power and Light Company Car Barn and Automobile Garage and a minor amount of ROW would be required from the property (with no impacts to the building itself). The NC1 alternative would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

The NC2 project alternative would be almost identical to the NC1 alternative in the vicinity of the resource, with a minor shift in rail alignment. The NC2 alternative would also require a use of the resource in order to bridge West Jones Street and would have the same visual and property impacts as the NC1 alternative. Therefore, the NC2 alternative would have an adverse effect on this resource under Section 106 of the NHPA and involve a Section 4(f) use.

The proposed NC3 rail alignment would close the existing at-grade railroad crossing at West Jones Street. No ROW would be required from the resource. The NC3 alternative would have no effect on this resource under Section 106 of the NHPA; the alternative would not require a Section 4(f) use.

5.7.58 National Art Interiors (NC)

The three SEHSR project alternatives share concurrent ROW near this resource. The alternatives would impact a retaining wall that is located within railroad ROW and provides support for the foundation of the National Art Interiors building. This wall would be reconstructed as part of the SEHSR project. The NC1, NC2, and NC3 alternatives would have no adverse effect on the resource under Section 106 of the NHPA. This determination is conditional; the SEHSR must perform vibration monitoring (including an emergency protocol) during construction of the SEHSR project to ensure the National Art Interiors building is not impacted.

The project would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to National Art Interiors; therefore, the impacts do not constitute a Section 4(f) use of the resource and the resource is not included in the remainder of the Section 4(f) evaluation.

5.7.59 Raleigh and Gaston Railroad Corridor (NC)

All of the proposed SEHSR project alternatives (NC1, NC2, and NC3) are located within the Raleigh and Gaston Railroad Corridor for the majority of their lengths (approximately 74% for NC1, 72% for NC3, and 67% for NC3). The alternatives would require a use of the resource in order to add a second set of tracks. Although the alternatives would not impact the vast majority of contributing elements to the corridor, they would all replace at least one of the historic concrete bridges and would potentially impact at least one of the historic stone-lined culverts. In addition, the NC2 alternative would require the relocation of the repeater tower in Norlina, NC. The NC1, NC2, and NC3 alternatives would have an adverse effect on the Raleigh and Gaston Railroad Corridor under Section 106 of the NHPA and involve a Section 4(f) use.

5.8 Section 4(f) Property Impacts – Battlefields

Impacts to the 10 battlefields eligible for the NRHP within the APE for the SEHSR project are described in Table 5-8 and the sections below. All battlefields are impacted similarly by the project. The battlefields in Table 5-8 are ordered from north to south as they appear in the SEHSR study corridor.

As discussed in Section 4.12.2.2, there are minor differences between the National Register-eligible battlefield boundaries proposed by ABPP in July 2009 within the project APE and those currently adopted by VHDR. There are seven areas where the VDHR boundaries within the project APE do not encompass all of the ABPP boundaries. None of the improvements proposed by the SEHSR project in these areas would result in a change to the Section 4(f) uses described below.

Table 5-8
Section 4(f) Determinations for Battlefields - Virginia

Resource Name	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use
Proctor's Creek	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Port Walthall Junction	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Swift Creek/Arrowfield Church	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Petersburg III/The Breakthrough	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Weldon Railroad/GlobeTavern	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*

Table 5-8 Section 4(f) Determinations for Battlefields - Virginia			
Resource Name	**VA1 Section 106 Effect/ Section 4(f) Use**	**VA2 Section 106 Effect/ Section 4(f) Use**	**VA3 Section 106 Effect/ Section 4(f) Use**
Peebles Farm	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Boydton Plank Road	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Hatcher's Run	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Lewis Farm	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*
Dinwiddie Courthouse	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use

5.8.1 Proctor's Creek

The three SEHSR project alternatives are on common alignment through this battlefield. The alternatives would require a use of the resource in order to add a second set of tracks. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.2 Port Walthall Junction

The three SEHSR project alternatives are on common alignment through this battlefield. The alternatives would require a use of the resource in order to add a second set of tracks and to remove at-grade crossings in the very southwestern corner of the larger battlefield. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.3 Swift Creek/Arrowfield Church

The three SEHSR project alternatives are on common alignment through this battlefield. The alternatives would require a use of the resource in order to add a second set of tracks and to minimally widen one existing roadway in the very northern portion of the battlefield. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.4 Petersburg III/The Breakthrough

The three SEHSR project alternatives are on common alignment through this battlefield. The alternatives would require a use of the resource in order to add a second set of tracks and to modify three roads within the battlefield boundaries: the existing railroad bridge over I-85 in the very northern portion of the battlefield would be widened to accommodate the second set of tracks, the bridge over Defense Road would be widened (see discussion of Defense Road above), and a short segment of Halifax Road east of the rail tracks would be straightened to remove a curve that runs adjacent to the rail line. In all, the changes include a very small percentage of the overall battlefield area. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.5 Weldon Railroad/Globe Tavern

The proposed SEHSR project alternatives vary slightly through this battlefield. All of the project alternatives would require a use of the resource in order to add a second set of tracks, provide a bridge over the CSX A-line tracks, and modify Halifax Road. The impacted areas comprise a very small segment of the larger 4,370 acre battlefield. The difference in the three alternatives is related to the way they bridge the active CSX A-line and a small access road in the vicinity of where Halifax Road crosses the CSX A-line (see Section 4.14.3.2 for more details). It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. As a condition of this effect recommendation, the National Park Service (NPS) Petersburg National Battlefield requested that the fill slopes for the proposed bridge over the CSX A-line have tree plantings to minimize the visual intrusion on the landscape. The VDHR also requested to view the engineering and vegetation plans before construction. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.6 Peebles Farm

The three SEHSR project alternatives are on common alignment through this battlefield. The alternatives would require a use of the resource in order to add a second set of tracks and to widen a small segment of Vaughn Road running north-south near the northeastern section of the southern battlefield section. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.7 Boydton Plank Road

The proposed SEHSR project alternatives vary slightly through this battlefield in the vicinity of the Burgess Connector, an inactive railroad corridor between the CSX S-Line (currently inactive) and the CSX A-Line (currently active). The VA1/VA3 project alternative stays within the existing railroad ROW in this area. The VA2 project alternative extends slightly outside of the existing ROW from Smith Grove Road to Dabney Mill Road, a distance of approximately two miles, in order to flatten out a severe curve in the existing rail alignment. All of the project alternatives would require a use of the resource in order to add a second set of tracks and modify a segment of Squirrel Level Road. It is recommended that the VA1,

VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.8 Hatcher's Run

The proposed SEHSR project alternatives vary slightly through this battlefield in the vicinity of the Burgess Connector, as described above for Boydton Plank Road battlefield. All of the project alternatives would require a use of the resource in order to add a second set of tracks and modify two roads. A small section of Vaughn Road would be widened and a small section of Squirrel Level Road would be improved. Both road improvement areas are located in the very northeastern corner of the larger battlefield. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.9 Lewis Farm

The three SEHSR project alternatives are on common alignment through this battlefield. All of the project alternatives would require a use of the resource in order to add a second set of tracks and to reroute a segment of Quaker Road. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. FRA has determined that the impacts from all three project alternatives are *de minimis*.

5.8.10 Dinwiddie Courthouse

The three SEHSR project alternatives are on common alignment through this battlefield. All of the project alternatives would require a use of the resource in order to add a second set of tracks. It is recommended that the VA1, VA2, and VA3 project alternatives would have no adverse effect on this battlefield under Section 106 of the NHPA. The project alternatives would not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the battlefield; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.9 Section 4(f) Property Impacts – Archaeology Sites

The effects of the SEHSR project on archaeological resources will be determined after the selection of the preferred alternative per 36 CFR 800.4(b)(2). This regulation permits a phased process to conduct identification and evaluation efforts on projects where alternatives under consideration consist of corridors or large land areas. Phase II investigations to determine eligibility for the NRHP, as well as determinations of the effects of the project on eligible archaeological resources, will be completed for the preferred alternative prior to the publication of the FEIS. Mitigation commitments will be developed for a memorandum of agreement (MOA) under Section 106 of the NHPA if NRHP eligible sites are identified and would be adversely impacted. The MOA will be included in the FEIS.

5.10 Avoidance Alternatives

The Section 4(f) statute requires the selection of an alternative that avoids the use of Section 4(f) property if that alternative is deemed feasible and prudent. For all resources that would require a Section 4(f) use by one or more of the proposed project alternatives (listed in Table 5-9), avoidance alternatives were investigated as described below.

Table 5-9
Resources Where at Least One Alternative Would Require a Section 4(f) Use (Not *De Minimis*)

Resource Name	Section/ State	VA1/NC1 Section 4(f) Use	VA2/NC2 Section 4(f) Use	VA3/NC3 Section 4(f) Use
Williams Bridge Company	AA / VA	Use	Use	Use
Chester Historic District	BB / VA	Use	Use	Use
Eichelberger House	BB / VA	Use	Use	Use
Defense Road	CC / VA	Use	Use	Use
Dimmock Line/Earthworks	CC / VA	Use	Use	Use
Bridge over Defense Road	CC / VA	Use	Use	Use
Wynnhurst	D / VA	Use	No Use	Use
Tourist Guest House	G / VA	No Use	No Use	Use
Oak Shades	G / VA	Use	*De Minimis* Use	No Use
La Crosse Commercial Historic District	I / VA	Use	Use	Use
Wright Farmstead	J / VA	Use	No Use	Use
Bracey Historic District	K / VA	No Use	Use	No Use
Granite Hall/Fitts House	L / VA	No Use	Use	No Use
Holloway Farm	O / NC	Use	Use	No Use
Henderson Historic District and Proposed Boundary Expansion	P / NC	Use	Use	Use
South Henderson Industrial Historic District	P / NC	Use	Use	Use
Franklinton Historic District (Includes Sterling Mill Historic District)	S / NC	Use	Use	Use
Roanoke Park Historic District	V / NC	No Use	No Use	Use
Raleigh Electric Company Power House	V / NC	Use	Use	No Use
Carolina Power and Light Company Car Barn and Automobile Garage	V / NC	Use	Use	No Use
Raleigh and Gaston Railroad Corridor	M – V / NC	Use	Use	Use

In several locations, historic resources that would require a Section 4(f) use by one or more project alternatives are located in close proximity to one another. In addition, the potential adverse effects to historic districts are very similar in nature. Therefore, the discussion of potential avoidance alternatives for resources in close proximity and historic districts are consolidated to avoid redundancy.

5.10.1 Alternatives that Avoid All Section 4(f) Resources

A total avoidance alternative is a feasible and prudent alternative that would avoid all Section 4(f) resources. Alternatives that do not meet the purpose and need for the project are not considered feasible and prudent. Avoidance alternatives for individual Section 4(f) resources were developed and evaluated as field work and research revealed these resources during the DEIS process.

A fundamental goal of the "incremental" high speed rail approach is the utilization of existing rail ROW to the maximum extent practicable, in order to best minimize the overall impacts to both the human and natural environments.

In approximately 40% of the project area, the rail design alignments were outside of developed areas on new ROW, and avoidance alternatives for individual resources were successfully designed while continuing to meet the overall project purpose and need.

Approximately 60% of the rail design alignments were able to effectively use the existing rail ROW. Cities and towns grew up historically along this railroad ROW for the transportation benefits provided in the movement of both people and goods. The presence of rail serving the city/town centers promoted, and continues to promote, sustainable transportation and sustainable development patterns.

The ability of the SEHSR to effectively divert trips to rail from the current and future air and highway travel in the corridor (thus helping reduce the growth rate of congestion in the corridor and resulting in a more balanced use of the corridor's transportation infrastructure) is greatly affected by the ability to serve the city/town centers. The developed corridor would provide not only high speed passenger service, but also the opportunity for conventional passenger service and, in some areas, commuter service, both of which will allow stops in many of the small cities and towns along the corridor. This improved service would provide the traveling public and special populations, such as the elderly and the disabled, with improved transportation choices.

The unavoidable Section 4(f) impacts addressed in this document are located along existing rail ROW within the developed areas of cities and towns. Avoidance of these areas by means of bypasses fails to meet the project purpose and need as just described. In addition, the design goals of one degree of curvature (both horizontally and vertically) result in substantially increased corridor lengths, increasing travel times, while resulting in additional, and likely significant, impacts to natural resources (e.g., streams and wetlands), along with residential and/or business relocations. In addition, the required ROW would result in significantly more expensive project costs. Cumulatively, these impacts are not prudent per 23 CFR 774.17.

5.10.2 Avoidance Alternatives for the Use (Not *De Minimis*) of Individual Section 4(f) Resources

The following sections discuss the evaluation of avoidance alternatives for individual Section 4(f) resources used by the SEHSR project. Resources are presented as they appear in the project corridor from north to south. Avoidance alternatives are not required when a finding of *de minimis* use is made for Section 4(f) historic resources because Section 4(f) is satisfied once *de minimis* applies.

An avoidance alternative for an individual Section 4(f) resource used by the SEHSR project must be evaluated within the section of the project where the resource is located. As explained in Section 2.2, the endpoints of each of the 26 sections of the project are in locations where the alternative alignments are in a common location. A preferred alternative will be selected for each section and joined together across the length of the project. Avoidance alternatives may not use another resource protected under Section 4(f) within the same section of the SEHSR project.

5.10.3 Chester, La Crosse Commercial, Henderson, Franklinton, and South Henderson Industrial Historic Districts

Several concepts to avoid adverse impacts to the Chester, La Crosse Commercial, Henderson, Franklinton, and South Henderson Industrial historic districts were assessed during the project planning process. This section discusses the concepts to avoid the use of the Section 4(f) resources that were objectively evaluated and explains the rationale for the dismissal of each concept. The following avoidance concepts were examined:

- At-grade crossing instead of grade separation
- Relocation of grade separation
- Bypass of historic district.

5.10.3.1 Avoidance Concept 1: At-Grade Crossing

In each of the historic districts, the adverse effect is directly tied to the proposed grade separation within the district as described in Section 5.3. The use of at-grade crossings instead of grade separations were considered as a means of avoiding the impacts. At-grade crossings would avoid or minimize uses of the Section 4(f) resources; however, they are not prudent per the definition of "feasible and prudent alternative" in 23 CFR 774.17 because they would result in the continuation of unacceptably unsafe conditions and neither address nor correct the transportation purpose and need that prompted the proposed project.

The overarching philosophy of the design of the SEHSR from Richmond, VA, to Raleigh, NC, is to consolidate and grade separate all railroad-roadway crossings for the primary purpose of ensuring both rail and roadway safety. At-grade crossings inherently have risk of train-automobile collisions. A collision at a crossing on a higher speed track is a significant event often causing a death in the vehicle and in the case of larger, heavier trucks, the possible derailment of the train and associated injuries.

Chapter 2 of the DEIS outlines additional reasons for grade separations:

- Elimination of railroad/roadway traffic issues
- Elimination of possible system failure and associated delays
- Elimination of easy trespasser access
- Elimination of horn noise
- Comparable capital cost to grade-separated structure
- Improved long term cost of maintenance
- Allows for future speed increases.

For these reasons, at-grade crossings fail to meet one of the purposes of the SEHSR project, which is to increase the safety and operability of the transportation system within the travel corridor. Therefore, this concept is not prudent per 23 CFR 774.17.

5.10.3.2 Avoidance Concept 2: Relocate Grade Separation

As described above, the adverse effect from the project on each of the historic districts is a direct result of the proposed grade separation. To avoid these impacts, relocations of the proposed grade separations to areas outside of or elsewhere within the historic districts were considered. In all cases, the potential relocations were not prudent because the changes to the road network would result in significant traffic problems, there were constructability issues, or there were other problems as explained in Table 5-10. Based on the unacceptable operational problems this concept would cause, it is not prudent per 23 CFR 774.17.

Table 5-10
Grade Separation Locations Considered

Historic District	Location	Reasons Selected or Excluded
Chester	Curtis St	*Selected* – Curtis St was selected for the grade separation because it carries the majority of traffic going north-south through Chester, VA. It continues beyond W Petersburg St to join VA Route 10 (W Hundred Rd) north of town.
	West St	*Excluded* – West St was excluded as a potential grade separation location because it lacks the connectivity of Curtis St. Additionally, locating the grade separation on West St would require routing traffic across West St and back up to Curtis St via Winfree St or W Petersburg St; the improvements necessary for this would potentially result in severe residential relocations along these streets.
	Snead St	*Excluded* – Snead Street was excluded as a potential grade separation location because it was too far south of the center of Chester, VA, to carry the flow of traffic north-south across the railroad. It would also have the same potential residential impacts as West St.
La Crosse Commercial	Meredith St/ Hillcrest Rd	*Selected* – Meredith St/Hillcrest Rd was selected for the grade separation because it provides the east-west connectivity required by the community of La Crosse for its downtown. A grade separation outside of town would have resulted in negative community impacts, notably the removal of traffic and associated commerce for downtown businesses.
	W Pine St	*Excluded* – W Pine St was excluded as a potential grade separation because it is too close to the existing grade separation at US 58. It would not provide the east-west connectivity needed within the town of La Crosse.

Table 5-10 Grade Separation Locations Considered		
Historic District	**Location**	**Reasons Selected or Excluded**
	Seaboard Ave/ College St	*Excluded* – Seaboard Ave/ College St was excluded as a potential grade separation because it would likely result in substantial commercial relocations in downtown La Crosse.
	Marengo Rd/ St Tammany Rd	*Excluded* – A grade separation that would connect Marengo Rd to St Tammany Rd with a bridge over the railroad was explored at the request of the community of La Crosse. This concept would have resulted in a long bridge approximately 30 feet over the proposed rail alignment. Visualizations of the design were shown to members of the community who then expressed concerns about accessibility and connectivity within downtown. In addition, this grade separation would have resulted in a similar or larger impact to the historic district.
Henderson	W Andrews Ave	*Selected* – W Andrews St (NC39) was chosen for the grade separation in Henderson because it is the primary east-west route through the town; closing this rail crossing would result in inoperable traffic operations.
	Chavasse Ave	*Excluded* – Chavasse Ave was excluded from consideration for a grade separation because of constructability issues. It was not possible to provide the required vertical clearance under the rail line and still maintain the existing side street intersections. Cutting off these side streets would alter the road network in the town to such a degree as to render the option imprudent.
South Henderson Industrial	Alexander Ave	*Selected* – Alexander Ave was chosen for the grade separation through the South Henderson Industrial District at the request of the Town of Henderson; any crossing to the north of Alexander Ave would have an impact on the Henderson historic district.
	Miriam Ave/ Wilkins Ln	*Excluded* – A crossing at Miriam Ave/Wilkins Ln (or any other crossing south of the historic district) would not provide the necessary east-west connectivity required to maintain traffic operations within Henderson.
Franklinton	Green St	*Selected* – Green St was selected for the grade separation through downtown Franklinton because it is the location of an existing grade separation (the SEHSR project would replace and widen the existing bridge); therefore, it would have the fewest residential and commercial relocations and maintain continuity in traffic operations.

Table 5-10 Grade Separation Locations Considered		
Historic District	**Location**	**Reasons Selected or Excluded**
	Mason St	*Excluded* – Mason St was excluded as a location for a grade separation because it would have substantial impacts to the commercial district as well as the historic district. It was not possible to evaluate placement of grade separations entirely outside the historic district because of the need to maintain connectivity within the downtown area.

5.10.3.3 Avoidance Concept 3: Bypass of Historic District

Impacts to the historic districts could be avoided if the project were to bypass the districts on new rail alignments. Such bypasses could be located in the general vicinity of an individual historic district (less than a mile from the district boundary) or bypass multiple districts (at a distance further away).

Either type of bypass would require leaving existing rail ROW and locating the alternatives on land that is either currently used for other purposes or undeveloped. This would likely result in significant residential and/or business relocations and impacts to natural resources (e.g., streams and wetlands). Such unacceptable and severe adverse social and environmental impacts are not prudent per 23 CFR 774.17.

In addition, bypasses would increase travel time by adding length to the alternatives and, potentially, by requiring slower speeds through sharper turns. Increases to travel time would have a negative impact on ridership. As discussed above, bypasses fail to meet one of the purposes of the SEHSR project, which is to divert trips from air and highway within the travel corridor. Therefore, this concept is not prudent per 23 CFR 774.17.

5.10.4 Williams Bridge Company (VA)

The SEHSR rail alternatives all require a small amount of ROW along the western boundary of the Williams Bridge Company. Rail alignment options in the vicinity of the Williams Bridge Company are severely constrained due to the need to utilize the existing James River railroad bridge (located just north of the Williams Bridge Company) and the Richmond flood wall gate (located just south of the Williams Bridge Company). The Richmond flood wall serves as a protective concrete wall against a sizeable flood. The gate is a large opening to provide passage except during periods of flooding, when it is closed. These constraints make it imprudent to relocate the rail alternatives off of the Williams Bridge Company property.

In addition to the ROW impacts from the railroad alternatives, the Section 4(f) use of the Williams Bridge Company is due to the additional driveway that was added to the SEHSR designs at the request of the company. This driveway would provide tandem tractor trailers leaving the Williams Bridge Company with a means to access the proposed grade separation at Goodes Street. These trucks are too large to utilize the existing tunnel under the railroad located at the entrance to the property. According to representatives of Williams Bridge Company, the failure of the project to provide access for tandem tractor trailers would result in closure of the company's Richmond location. This would be an unacceptable and

severe adverse social and economic impact. As a result of these potential impacts, an avoidance alternative for the Williams Bridge Company is not prudent per 23 CFR 774.17.

5.10.5 Eichelberger House (VA)

The SEHSR project alternatives are on common alignment in the vicinity of the Eichelberger House. Avoidance of the gated entrance to the Eichelberger House would require a realignment of the SEHSR rail alternatives through the Chester Historic District, with a shift to the south. This shift would impact a planned public park on the opposite corner of Curtis Street, which is also protected by Section 4(f). In addition, the realignment would likely result in significant residential impacts due to the terrain in the vicinity of the Eichelberger House. As a result of these potential impacts, an avoidance alternative for the Eichelberger House is not prudent per 23 CFR 774.17.

5.10.6 Defense Road, Dimmock Line/Earthworks, and Bridge over Defense Road (VA)

These three resources are all located directly adjacent to one another along Defense Road in Petersburg, VA. The SEHSR project alternatives are on common alignment in this area. Defense Road runs east-west through Petersburg and crosses the existing CSX rail line approximately 250 feet south of I-85. Rail alignment options for the SEHSR project are severely constrained in this area due to the need to utilize the existing rail underpass at I-85 and provide rail access to Collier rail yard, which is located approximately one mile south of Defense Road. Use of the existing rail underpass at I-85 is necessitated by the extraordinary costs and operational issues (e.g., maintaining highway and rail traffic) associated with constructing a new rail underpass. Access to Collier rail yard is also essential to maintenance of railroad operations. The yard serves as an interchange between the CSX and Norfolk Southern rail lines, and provides storage areas, staging areas, bulk transfer, and industrial switching facilities. Due to these constraints, it is not possible to realign the project alternatives in such a way as to avoid crossing Defense Road in the vicinity of the existing railroad bridge over Defense Road. Therefore, an avoidance alternative for Defense Road, Dimmock Line/Earthworks, and the Bridge over Defense Road is not prudent per 23 CFR 774.17.

5.10.7 Wynnhurst (VA)

The VA1 and VA3 SEHSR project alternatives would result in a Section 4(f) use of the Wynnhurst property. The VA2 alternative is an avoidance alternative for Wynnhurst within Section D of the SEHSR project. The alignment veers to the northwest of Wynnhurst through the small community of Rawlings, VA. This alternative does not require the acquisition of ROW from Wynnhurst and would not result in a Section 4(f) use of the resource.

The VA2 alternative is a prudent and feasible avoidance alternative within Section D of the project. It avoids an impact to a species protected under the Endangered Species Act, while the VA1/VA3 alternative would result in an impact. In addition, the VA2 alternative has lower costs and fewer associated relocations than the VA1/VA3 alternatives. However, it has greater impacts to streams and wetlands than the VA1/VA3 alternatives. All efforts will be made during final design to further avoid and minimize impacts to streams and wetlands.

5.10.8 Tourist Guest House (VA)

The VA3 SEHSR project alternative would result in a Section 4(f) use of the Tourist Guest House within Section G of the project. The VA2 alternative is an avoidance alternative for these impacts to the Tourist Guest House. The alternative stays more than 500 feet south of the boundary of the Tourist Guest House and skirts the southern boundary of the Oak Shades property, which is also located within Section G and upon which it has a *de minimis* impact. The VA2 alternative does not require the acquisition of ROW from the Tourist Guest House and would not result in a Section 4(f) use of the resource. Although the VA1alternative would not result in a Section 4(f) use of the Tourist House, it would result in a Section 4(f) use of Oak Shades in the same section of the project.

The VA2 alternative is a prudent and feasible avoidance alternative within Section G of the project. It has similar impacts to natural resources and lower costs than the VA1 and VA3 alternatives.

5.10.9 Oak Shades (VA)

The VA1 SEHSR project alternative would result in a Section 4(f) use of Oak Shades within Section G of the project. The VA2 alternative is an avoidance alternative for these impacts to Oak Shades. The alternative skirts the southern boundary of the resource and was determined to have a *de minimis* impact upon it. The VA2 alternative would not result in a Section 4(f) use of the Tourist Guest House, which is also located within Section G. Although the VA3 alternative would not result in a Section 4(f) use of Oak Shades, it would result in a Section 4(f) use of the Tourist Guest House in the same section of the project.

As discussed above, the VA2 alternative is a prudent and feasible avoidance alternative within Section G of the project. It has similar impacts to natural resources and lower costs than the VA1 and VA3 alternatives.

5.10.10 Wright Farmstead (VA)

The VA1 and VA3 SEHSR project alternatives would result in a Section 4(f) use of the Wright Farmstead within Section J of the project. VA2 is an avoidance alternative for these impacts to the Wright Farmstead. The alignment is located more than 500 feet from the boundary of the resource. This alternative does not require the acquisition of ROW from the Wright Farmstead and would not result in a Section 4(f) use of the resource.

The VA2 alternative is a prudent and feasible avoidance alternative within Section J of the project. It has fewer impacts to streams and similar impacts to other resources as the VA1 and VA3 alternatives. The VA2 alternative also has similar costs to the VA1 and VA3 alternatives. However, the VA2 alternative has a greater number of impacted noise receptors than the VA1 and VA3 alternatives. Noise abatement measures will be analyzed during the final design process.

5.10.11 Bracey Historic District (VA)

The VA2 SEHSR project alternative would result in a Section 4(f) use of the Bracey Historic District within Section K of the project. The VA1 and VA3 alternatives are avoidance alternatives for these impacts to the Bracey Historic District. These alternatives are on common alignment through Section K. They would construct a new rail alignment west of

the original Seaboard Air Line tracks, outside of the historic district. These alternatives do not require the acquisition of ROW from the Bracey Historic District and would not result in a Section 4(f) use of the resource.

The VA1/VA3 alternatives are prudent and feasible avoidance alternatives within Section K of the project. The VA1/VA3 alternatives would result in fewer stream impacts than the VA2 alternative and would have similar impacts to other resources.

5.10.12 Granite Hall/Fitts House (VA)

The VA2 SEHSR project alternative would result in a Section 4(f) use of Granite Hall/Fitts House within Section L of the project. The VA1 and VA3 alternatives are avoidance alternatives for these impacts to Granite Hall/Fitts House. These alternatives are on common alignment through Section L. They are located approximately 700 feet west of the resource. These alternatives do not require the acquisition of ROW from Granite Hall/Fitts House and would not result in a Section 4(f) use of the resource.

The VA1/VA3 alternatives are prudent and feasible avoidance alternatives within Section L of the project. The VA1/VA3 alternatives would result in fewer stream and wetland impacts, fewer relocations, and fewer noise and vibration impacts than the VA2 alternative.

5.10.13 Holloway Farm (NC)

Although the NC3 project alternative is located more than 500 feet from Holloway Farm and would not result in a Section 4(f) use of the resource, it is not an avoidance alternative because it would use other resources protected under Section 4(f) within the same section of the SEHSR project. Within Section O, all project alternatives would result in a Section 4(f) use of the Raleigh and Gaston Railroad Corridor. As described below, it is not possible for the project alternatives to avoid a use of the railroad corridor. Therefore, an avoidance alternative for Holloway Farm is not prudent per 23 CFR 774.17.

Although the NC3 alternative is not a prudent and feasible avoidance alternative in Section O of the project, it is the alternative within Section O that causes the least overall harm to Section 4(f) resources. It would require a use of the Raleigh and Gaston Railroad Corridor (as would the NC1 and NC2 alternatives), but would not require a use of Holloway Farm. Compared to the NC1 and NC2 alternatives, the NC3 alternative would result in fewer impacts to wetlands, greater impacts to streams, fewer noise and vibration impacts, and fewer relocations.

5.10.14 Roanoke Park Historic District (NC)

Although the NC1 and NC2 project alternatives would not result in a Section 4(f) use of the Roanoke Park Historic District, they are not avoidance alternatives because they would use other resources protected under Section 4(f) within the same section of the SEHSR project. Within Section V, NC1 and NC2 would result in Section 4(f) uses of the Raleigh Electric Company Power House and the Carolina Power and Light Company Car Barn and Automobile Garage.

The NC3 alternative takes ROW from the eastern boundary of the Roanoke Park Historic District and would result in a Section 4(f) use of the resource. If the rail alignment were

shifted east to avoid the district entirely, it would impact the Norfolk Southern rail yard, which is immediately adjacent to the district. Due to the configuration of railroad tracks and operations buildings, combined with the location of Capital Boulevard immediately to the east, this impact would require the relocation of the rail yard. Reconfiguring the rail yard is not possible because it would require taking the yard out of operation. Maintenance of the Norfolk Southern rail yard is essential to the company's railroad operations in Raleigh, NC. The yard serves as a railway car sort facility and provides interchanges with CSX, Coastal Carolina Railway, and North Carolina Railroad. Relocation of the rail yard would be an unacceptable and severe adverse social and economic impact, and result in an extraordinary cost to the project. Therefore, an avoidance alternative for the Roanoke Park Historic District is not prudent per 23 CFR 774.17.

An analysis will be performed for the FEIS to determine which of the three project alternatives in Section V of the SEHSR project causes the least overall harm to Section 4(f) resources. This analysis will include:

- The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
- The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- The relative significance of each Section 4(f) property;
- The views of the official(s) with jurisdiction over each Section 4(f) property;
- The degree to which each alternative meets the purpose and need for the project;
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- Substantial differences in costs among the alternatives.

5.10.15 Raleigh Electric Company Power House (NC)

Although the NC3 project alternative does not impact the Raleigh Electric Company Power House, it is not an avoidance alternative because it would use another resource protected under Section 4(f) within the same section of the SEHSR project. Within Section V, NC3 would result in a Section 4(f) use of the Roanoke Park Historic District.

Avoiding a Section 4(f) use of the Raleigh Electric Company Power House would require one of three design changes: (1) shifting the rail alignment east or west away from the resource; (2) maintaining the existing at-grade rail crossing at West Jones Street; or (3) closing the crossing and relocating the grade separation to another location. Shifting the alignment would result in unacceptable and severe impacts to businesses and residences in downtown Raleigh. Maintaining the existing at-grade crossing does not meet the purpose and need of the SEHSR project (see Section 5.10.3.1). Closing the crossing would also be problematic. The City of Raleigh stated in a letter dated July 30, 2008, that closing the West Jones Street rail crossing under the NC1 or NC2 alternatives would cause extraordinary traffic problems and community disruption. Therefore, an avoidance alternative for the Raleigh Electric Company Power House is not prudent per 23 CFR 774.17.

As discussed above, an analysis will be performed for the FEIS to determine which of the three project alternatives in Section V of the SEHSR project causes the least overall harm to Section 4(f) resources.

5.10.16 Carolina Power and Light Company Car Barn and Automobile Garage (NC)

Although the NC3 project alternative would not result in a Section 4(f) use of the Carolina Power and Light Company Car Barn and Automobile Garage, it is not an avoidance alternative because it would use another resource protected under Section 4(f) within the same section of the SEHSR project. Within Section V, NC3 would result in a Section 4(f) use of the Roanoke Park Historic District.

Avoiding a Section 4(f) use of the Carolina Power and Light Company Car Barn and Automobile Garage would require one of three design changes: (1) shifting the rail alignment east or west away from the resource; (2) maintaining the existing at-grade rail crossing at West Jones Street; or (3) closing the crossing and relocating the grade separation to another location. Shifting the alignment would result in unacceptable and severe impacts to businesses and residences in downtown Raleigh. Maintaining the existing at-grade crossing does not meet the purpose and need of the SEHSR project (see Section 5.10.3.1). Closing the crossing would also be problematic. The City of Raleigh stated in a letter dated July 30, 2008, that closing the West Jones Street rail crossing under the NC1 or NC2 alternatives would cause extraordinary traffic problems and community disruption. Therefore, an avoidance alternative for the Carolina Power and Light Company Car Barn and Automobile Garage is not prudent per 23 CFR 774.17.

As discussed above, an analysis will be performed for the FEIS to determine which of the three project alternatives in Section V of the SEHSR project causes the least overall harm to Section 4(f) resources.

5.10.17 Raleigh and Gaston Railroad Corridor (NC)

An avoidance alternative for the Raleigh and Gaston Railroad Corridor would require relocating the rail alignments to avoid all reinforced concrete bridges and stone-lined culverts within the existing railroad ROW between Norlina, NC, and Raleigh, NC. To avoid these Section 4(f) uses of the resources would involve relocating the alternatives on land that is either currently used for other purposes or undeveloped. This would cause unacceptable and severe adverse social and environmental impacts such as significant residential and/or business relocations and impacts to natural resources. In addition, the required ROW would result in significantly greater project costs. Cumulatively, these impacts are not prudent per 23 CFR 774.17.

5.10.18 Summary

In summary, there are 21 historic resources where one or more of the SEHSR project alternatives would result in a Section 4(f) use (not *de minimis*). Of these, there are six resources where there is a reasonable and prudent avoidance alternative that would not result in a Section 4(f) use within the section of the project where the resource is located. There remain 15 resources for which there is no feasible and prudent alternative to a Section 4(f) use.

5.11 Measures to Minimize Harm

The discussion of measures to minimize harm focuses on the 13 resources where all project alternatives would result in a Section 4(f) use. Resources are ordered from north to south as they appear in the SEHSR study corridor. Minimization measures are not required when a finding of *de minimis* use is made for Section 4(f) resources because Section 4(f) is satisfied once *de minimis* applies.

The minimization measures presented here do not represent the full suite of measures that will ultimately be undertaken by the project. The specific minimization measures for the project will be determined during the final design stage based on coordination with the FRA, Virginia DHR, North Carolina HPO, and consulting parties and will be reflected in the final Section 4(f) evaluation included in the FEIS.

5.11.1 Williams Bridge Company (VA)

Members of the SEHSR project team met with a representative of the Williams Bridge Company on May 12, 2009, to discuss ways to minimize the impacts of the project on the resource. The Williams Bridge Company expressed concerns about whether the changes in access to the property would accommodate the tandem tractor trailers (as much as 150 feet long) they use to deliver large steel structures. They explained that the highest priority for the company is to maintain access to the adjacent road and rail network; this access is vital to being able to operate their business. In response, designs for a driveway access to the proposed railroad bridge on Goodes Street were added to the project, which will serve this need.

In addition, the SEHSR project team asked the Williams Bridge Company if there was any additional mitigation the project could provide. They responded that they might be interested in allowing historians to interview members of their staff who have been working for the company dating back to the WWII period. This information would then be shared with their staff and the general public.

5.11.2 Chester Historic District (VA)

Members of the SEHSR project team met with the Chesterfield Historical Society on April 8, 2009, to discuss ways to minimize the impacts of the project on historic resources in Chesterfield County, VA. Representatives of the society stated they would consider minimization measures and follow up with the SEHSR project team at a later date. Possible mitigation measures suggested by the SEHSR team included NRHP nomination assistance and interpretive signs within the district.

A meeting was held at the Chesterfield County Public Library Enon Branch in Chester, VA, on May 12, 2009, with property owners of historic resources within the Chester Historic District. Several property owners expressed concerns that the proposed railroad overpass on Curtis Street would increase the volume and speed of vehicles on Curtis Street and were also concerned about the wide cross-section (i.e., footprint) shown on the SEHSR designs at that time. In response, the designs were altered to provide a more context-sensitive cross-section with curb and cutter. This minimizes the ROW necessary for the project along Curtis Street and is more in keeping with the existing setting.

5.11.3 Eichelberger House (VA)

Members of the SEHSR project team met with owners of the properties comprising the Eichelberger House on April 8, 2009, and May 12, 2009, to discuss ways to minimize the impacts of the project on the resource. Possible mitigation measures include relocating the stone gate and walking path outside of the required ROW. In addition, the owner of the main house of the Eichelberger House asked for information about possible assistance in nominating the property for inclusion on the NRHP. The SEHSR project team will follow up with him about this opportunity.

The specific minimization measures for the project will be determined during the final design stage based on coordination with the FRA, VDHR, and the resource owners.

5.11.4 Defense Road, Dimmock Line/Earthworks, and Bridge over Defense Road (VA)

Members of the SEHSR project team met with the NPS Petersburg National Battlefield and City of Petersburg Preservation Planning office on May 12, 2009, to discuss ways to minimize the impacts of the project on the resources in the vicinity of Defense Road. The NPS and City of Petersburg requested that the design for the new bridge and associated retaining wall be comparable, but not identical, to the existing structures in order to minimize impacts to the historic resources. In addition, the City of Petersburg requested that an interpretive Civil War Trails sign about the history of Defense Road be placed in Lee Memorial Park, which is located on Defense Road just south of the railroad overpass. The NPS also asked that all efforts be made to minimize disturbance to the Dimmock Line/Earthworks. This will be reflected in the MOA that is developed for inclusion in the FEIS.

5.11.5 La Crosse Commercial Historic District (VA)

The proposed project alternatives through the La Crosse Commercial Historic District represent the result of extensive coordination with the La Crosse town manager, town council, and local citizens. The project team met with representatives of the town and members of the public to discuss the project on July 22, 2003; December 10, 2004; January 30, 2006; May 10, 2006; and September 18, 2006. Visualizations (i.e., computer-generated "before and after" images) of some of the early project designs were prepared in 2005 to assist the public in understanding the design constraints and options.

The design that is presented in this DEIS has addressed the concerns and desires expressed by the local community, which included maintaining the historic feeling of the town. In a letter dated September 15, 2006, the La Crosse town manager acknowledged that representatives of the SEHSR project had "made every effort to accommodate the Town's requests" through the design process and "included the Town's input on many key issues, which the Town feels is important for its future growth and success."

5.11.6 Henderson Historic District and Proposed Boundary Extension (NC)

Members of the SEHSR project team met with representatives of the Town of Henderson, NC, and members of the public to discuss the project on June 24, 2003; February 14, 2006; and September 20, 2007. At these meetings, proposed designs were reviewed and

suggestions were solicited from the town. Cultural resource impacts were included in the discussion. As a result of this coordination, a pedestrian underpass within the Henderson Historic District was added to the project design in order to accommodate the non-motorized traffic through the historic downtown area.

Members of the SEHSR project team met with the North Carolina HPO on September 8, 2008, to discuss the impacts of the proposed project on cultural resources. The following were identified as potential measures to minimize impacts to the Henderson Historic District:

- Minimize the taking of trees in the vicinity of the bridge over Andrews Avenue
- Minimize impacts to contributing elements to the historic district

These minimization efforts will be undertaken during the final design process.

5.11.7 South Henderson Industrial Historic District (NC)

Members of the SEHSR project team met with representatives of the Town of Henderson, NC, and members of the public to discuss the project on June 24, 2003; February 14, 2006; and September 20, 2007. At these meetings, proposed designs were reviewed and suggestions were solicited from the town. Cultural resource impacts were included in the discussion. The designs presented in the DEIS were based on input provided at the meetings.

In order to minimize property impacts within the South Henderson Industrial District, the connection of Nicholas Street to Alexander Avenue would be closed under the project alternatives. Without this closure, it would be necessary to raise Nicholas Street to meet the new elevation of Alexander Avenue, which would be higher due to the proposed bridge over the railroad tracks. Raising the elevation of Nicholas Street would require greater ROW along Nicholas Street through the historic district.

Letters from the SEHSR project team were sent to all property owners located within the South Henderson Industrial Historic District in August 2009 inviting them to provide input on impacts to historic resources. Several comments received have expressed concern about the impact that the closure of Nicholas Street would have on travel patterns with the district, particularly for truck traffic. The SEHSR project design will reevaluate the closure of Nicholas Street as the project moves forward based on coordination with HPO, the Town of Henderson, and the resource owners.

5.11.8 Franklinton Historic District (NC)

The project team met with representatives of the Town of Franklinton, NC, and members of the public to discuss the project on June 26, 2003, and May 9, 2008. At these meetings, proposed designs were reviewed and suggestions were solicited from the town. As a result of this input, the project alternatives include two pedestrian-only grade-separated crossings of the railroad to accommodate the non-motorized traffic through the historic downtown area (overpass of Mason Street and underpass near College Street). In addition, the underpass at Greene Street was designed to include pedestrian sidewalks. The project alternatives also include north-south connector streets just outside the historic district, which serve to address concerns raised by the town about the loss of connectivity due to the closure of at-grade railroad crossings. The project team also investigated several railroad bridge locations proposed by town; however, these bridges were ruled out due to impacts to contributing elements to the historic district and streams.

5.11.9 Roanoke Park Historic District (NC)

The designs for the NC3 project alternative use a retaining wall to minimize the amount of ROW required from the Roanoke Park Historic District. The project team also investigated shifting the alignment slightly east; however, this would require the relocation of the Norfolk Southern rail yard.

Members of the SEHSR project team met with the North Carolina HPO on September 2, 2009, to discuss the impacts of the proposed project on cultural resources. The following were identified as potential measures to minimize impacts to the Roanoke Park Historic District:

- Landscaping to minimize the visual intrusion
- The fence that sits atop the retaining wall should be visually appropriate for the setting

These minimization efforts will be undertaken during the final design process.

5.11.10 Raleigh Electric Company Power House (NC)

The designs for the NC1 and NC2 project alternatives use a retaining wall to minimize the amount of ROW required from the Raleigh Electric Company Power House. In addition, the proposed railroad bridge uses straddle bents so that access from West Jones Street is maintained underneath the bridge. This also serves to reduce the visual impact of the bridge on the historic resource.

5.11.11 Carolina Power and Light Company Car Barn and Automobile Garage (NC)

The designs for the NC1 and NC2 project alternatives use a retaining wall to minimize the amount of ROW required from the Carolina Power and Light Company Car Barn and Automobile Garage. In addition, the proposed railroad bridge uses straddle bents so that access from West Jones Street is maintained underneath the bridge. This also serves to reduce the visual impact of the bridge on the historic resource.

5.11.12 Raleigh and Gaston Railroad Corridor (NC)

The SEHSR project alternatives do not impact the vast majority of contributing elements to the Raleigh and Gaston Railroad Corridor (e.g., several historic stations, a section house, a defect and dragging detection equipment shed, and the railroad turntable in Raleigh). The impacts to the reinforced concrete bridges and stone-lined culverts cannot be minimized because the project requires these structures to be replaced. If the NC2 alternative is selected as the preferred alternative in Section M, the project will relocate the repeater tower that is currently located in the ROW required for this alternative.

5.12 Coordination

The project team met with VDHR and NC HPO several times during the development of project alternatives to discuss impacts to historic resources. Measures to minimize and mitigate for impacts, as well as potential avoidance measures, were also discussed. Determination of effects meetings were held with VDHR on April 15, 2009, August 7, 2009,

and November 20, 2009. Similar determination of effects meetings with HPO were held on August 20, 2008, September 2, 2009, and September 29, 2009.

The following discussion describes the coordination between the SEHSR project team and individual property owners or officials with jurisdiction over resources protected under Section 4(f). Although coordination has taken place with numerous individuals and organizations, the discussion below focuses on the 14 resources where all project alternatives would result in a Section 4(f) use. Resources are ordered from north to south as they appear in the SEHSR study corridor.

5.12.1 Williams Bridge Company (VA)

A SEHSR meeting was held at the Williams Bridge Company in Richmond, VA, on May 12, 2009. The meeting focused on measures to minimize impacts to the resource.

5.12.2 Resources Located in Chesterfield County, VA

The SEHSR project team held two meetings in Chesterfield County, VA, to solicit input on measures to minimize impacts to historic resources within the county. The first meeting was held at the Chesterfield Historical Society in Chesterfield County, VA, on April 8, 2009. In attendance were representatives of the historic society and two property owners for the Eichelberger House. A second meeting was held at the Chesterfield County Public Library Enon Branch in Chester, VA, on May 12, 2009. In attendance were property owners representing the Chester Historic District, Eichelberger House, Centralia Post Office, Circle Oaks, and Ragland House.

5.12.3 Defense Road, Dimmock Line/Earthworks, and Bridge over Defense Road (VA)

A meeting was held at the NPS Petersburg National Battlefield office in Petersburg, VA, on May 12, 2009, with representatives from the NPS and the City of Petersburg Preservation Planning office. The project alternatives were presented and input was solicited on measures to minimize impacts to Defense Road, Dimmock Line/Earthworks, and the Bridge over Defense Road.

5.12.4 La Crosse Commercial Historic District (VA)

The project team met with representatives of the Town of La Crosse, VA, and members of the public to discuss the project on July 22, 2003; December 10, 2004; January 30, 2006; May 10, 2006; and September 18, 2006. At these meetings, the proposed project designs were presented for comment. Impacts to the historic district were considered in the evaluation of the designs.

5.12.5 Henderson Historic District and Proposed Extension and South Henderson Industrial Historic District (NC)

Members of the SEHSR project team met with representatives of the Town of Henderson, NC, and members of the public to discuss the project on June 24, 2003; February 14, 2006; and September 20, 2007. At these meetings, the proposed project designs were presented

for comment. Impacts to the historic district were considered in the evaluation of the designs.

Letters were sent to all property owners located within the Henderson Historic District and South Henderson Industrial Historic District in August 2009 inviting them to participate in the SEHSR Section 106 process. A meeting to discuss minimization and mitigation for impacts to the district will take place in early 2010.

5.12.6 Franklinton Historic District (NC)

The project team met with representatives of the Town of Franklinton, NC, and members of the public to discuss the project on June 26, 2003, and May 9, 2008. At these meetings, the proposed project designs were presented for comment. Impacts to the historic district were considered in the evaluation of the designs.

Letters were sent to all property owners located within the Franklinton Historic District in August 2009 inviting them to participate in the SEHSR Section 106 process. A meeting to discuss minimization and mitigation for impacts to the district will take place in early 2010.

5.12.7 Resources Located in Raleigh, NC

The project team met with representatives of the City of Raleigh and members of the public to discuss the project on July 15, 2003; January 13, 2005; September 21, 2005; April 7, 2008; and April 17, 2008. At these meetings, the proposed project designs were presented for comment. Impacts to the historic district were considered in the evaluation of the designs.

On October 20, 2009, the SEHSR project team discussed the project with a member of the City of Raleigh Planning Department, which supports the 12-member Raleigh Historic Districts Commission, the citizens' body appointed by the city council to advise on issues related to locally-recognized historic districts. Subsequently, the proposed project designs have been provided to the City.

Letters were sent to all potentially impacted property owners within the Roanoke Park Historic District and the owner of the Raleigh Electric Company Power House and Carolina Power and Light Company Car Barn and Automobile Garage in October 2009 inviting them to participate in the SEHSR Section 106 process. A meeting to discuss minimization and mitigation for impacts to the resources will take place in early 2010.

5.12.8 Raleigh and Gaston Railroad Corridor (NC)

On October 5, 2009, a letter was sent to CSX Transportation inviting them, as the primary property owner within the Raleigh and Gaston Railroad Corridor, to participate in the Section 106 consultation process for the SEHSR project. At the time of publication of this document, no response has been received.

5.12.9 Consulting Parties

Section 106 of the NHPA encourages early coordination with groups or individuals who have a demonstrated interested in historic properties that may be affected by a proposed project.

These groups or individuals, known as Section 106 consulting parties, have the opportunity to comment on the identification and evaluation of historic resources, as well as provide their views on effects and proposed strategies to avoid, minimize, or mitigate adverse effects. The following entities were invited to participate as consulting parties under the Section 106 process for the SEHSR project (* indicates acceptance of invitation):

- Alliance to Conserve Old Richmond Neighborhoods
- American Battlefield Protection Program
- Atlantic Coast Line & Seaboard Air Line Railroad Historical Society
- Battersea, Inc.*
- Brunswick County Historical Society (VA)
- Catawba Indian Tribe
- Central Virginia Battlefields Trust
- Chesterfield Historical Society (VA)*
- Civil War Preservation Trust
- CSX Transportation
- Dinwiddie County Historical Society (VA)
- Historic Richmond Foundation (VA)*
- Historic Petersburg Foundation (VA)
- Mecklenburg Historical Society (VA)
- National Park Service – Petersburg National Battlefield*
- National Park Service – Richmond National Battlefield*
- Raleigh Historic Districts Commission (NC)*
- Southside Virginia Genealogical Society
- Virginia Council on Indians*

In addition to these organizations, letters were sent to all property owners located within the Henderson Historic District (NC), Franklinton Historic District (NC), and South Henderson Industrial Historic District (NC) inviting them to participate in the SEHSR Section 106 process. There are no historic societies within the counties where these districts are located.

5.13 Final Section 4(f) Evaluation

The Final Section 4(f) Evaluation will be completed for the FEIS for the SEHSR project. Included will be an analysis to determine the project alternative in each of the 26 sections of the project that has the least overall harm on Section 4(f) resources. All possible planning measures to minimize harm to Section 4(f) resources will be undertaken and documented in this evaluation.