5 FINAL SECTION 4(F) EVALUATION

A condensed format was used for this Final Environmental Impact Statement (EIS), as explained in the Introduction to this report. However, because the Section 4(f) Evaluation is intended to b*e a stand-alone document, it is included in its entirety. Changes from the Richmond to Raleigh Project Tier II DEIS are spelled out and address new resources identified subsequent to publication of the Richmond to Raleigh Project Tier II DEIS and changes to impacts as a result of design modifications.*

In this chapter, the term "Project" refers to the Richmond to Raleigh Project Tier II EIS project. The study area for the natural and physical environment, cultural resources, and infrastructure varies from 300 to 1,000 feet in width depending on the resource, and is centered about the existing rail line or right of way (ROW). In areas where the existing railroad curves do not meet the design standards for high speed rail, the study area expands to approximately 500 feet outside of the proposed rail realignments.

The study areas for the human environment, noise, and air quality are generally larger than the project area boundaries. The larger study areas are defined by regions of influence in which a resource may potentially have noticeable project-related impacts. Regions of influence for human resources account for factors such as community sizes, geographical and political boundaries, and census boundaries. These human resources include social and economic issues, community resources, and land use planning. The air quality study area is influenced by local and regional atmospheric conditions. The noise study area is determined by the limit of noise intrusions associated with the project.

*All references to "study area" and "P*roject" below pertain to the Richmond to Raleigh Project, unless otherwise noted.

Section 4(f) of the Department of Transportation Act of 1966 (Section 4(f)), as set forth in Title 49 United States Code (USC) Section 303, 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), and archaeological sites that are listed or eligible for inclusion in the NRHP and warrant preservation in place. 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, FRA has determined these procedures are appropriate for use for the Richmond to Raleigh Project Tier II EIS.

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 will 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.

According to 23 CFR 774.17, an alternative is not feasible if it cannot be built as a matter of sound engineering judgment. Likewise, an alternative is not prudent if:

i. It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

ii. It results in unacceptable safety or operational problems;

iii. After reasonable mitigation, it still causes:

   a. Severe social, economic, or environmental impacts;

   b. Severe disruption to established communities;

   c. Severe disproportionate impacts to minority or low income populations; or

   d. Severe impacts to environmental resources protected under other Federal statutes;

iv. It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;

v. It causes other unique problems or unusual factors; or

vi. It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

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 (23 USC 101), 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 will 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, SEHSR Corridor. It constitutes 162 miles of the approximately 450-mile SEHSR 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, VA to Raleigh, NC is tied to implementation of the larger SEHSR Corridor. Therefore, the purpose of the Richmond to Raleigh Project proposed action is to facilitate the previously approved purpose for the SEHSR Corridor Tier I EIS, which includes the following and is applicable to the Richmond to Raleigh Project section:

- Divert trips from air and highway within the travel corridor, thus reducing the growth rate of congestion (the I-95 portion of the corridor is included in this Richmond to Raleigh Project section and it carries a significant portion of the automobile traffic)
- 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 (this specific project section serves as the key link for these travelers to the busy Northeast).

More information about the purpose of the SEHSR Corridor can be found in the 2002 SEHSR Corridor Tier I EIS and on the program's website at www.sehsr.org.

5.1.2 PROJECT DESCRIPTION AND APPROACH

The SEHSR Corridor 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 purpose and need, along with the preferred corridor. This Richmond to Raleigh Project 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). 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 EIS 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 Corridor 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 Richmond to Raleigh Project Tier II analysis, except as needed to provide a baseline for quantitative analyses such as noise and vibration.

The preferred SEHSR 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 SEHSR Corridor north of Petersburg, VA, and west of Raleigh, NC. The portion of the SEHSR 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, NC, to Raleigh, NC.

The Richmond to Raleigh Project Tier II EIS is focused on the portion of the SEHSR Corridor between Richmond, VA, and Raleigh, NC, which includes the section without existing rail service. Figure 1-2 shows the Study Area for the Richmond to Raleigh Project Tier II EIS.

5.1.3 PROJECT ALTERNATIVES

The Richmond to Raleigh Project Tier II EIS applies the incremental approach to the development of alternative alignments that was adopted in the Tier I study. 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 Richmond to Raleigh Project Tier II DEIS, the Project Study Area was divided into 26 sections labeled AA to V, from Richmond, VA, south to Raleigh, NC (Figure 2-1). Throughout much of the Study Area, 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.

In response to comments on the Richmond to Raleigh Project Tier II DEIS, an additional rail alternative was developed for evaluation in three Project sections: the VA4 Project alternative was developed for Section D in Brunswick County, VA; the VA4 Project alternative was developed for Section G in Brunswick County, VA; and the NC5 Project alternative was developed for Section V in Raleigh, NC. A discussion of the development of these alternatives, overviews of the alignments in each of the 26 sections, and identification of the Preferred Alternative are provided in Chapter 2 of this FEIS.

5.2 DESCRIPTION OF THE 4(F) RESOURCES – PARKS, RECREATION AREAS, WILDLIFE REFUGES

The Project will not use land from any recreation area or wildlife refuge; however, it will cross 11 publicly-owned trails in 12 locations, require a small amount of ROW from three public parks (two local and one national park), and come in close proximity to four planned or existing public parks and two playgrounds (Table 5-1). The resources are listed in the order they appear in the Project study

area from north to south. An asterisk denotes resources identified subsequent to publication of the Richmond to Raleigh Project Tier II DEIS.

Table 5-1
Parks, Recreation Areas, and Wildlife Refuges in the Project 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
Falling Creek Park Expansion*	AA/6	Chesterfield	VA
Falling Creek Ironworks Park *	AA/6	Chesterfield	VA
James River Greenway (Kingsland Creek) (Planned) *	AA/8	Chesterfield	VA
Chester Linear Park Expansion (Planned) *	BB/11	Chesterfield	VA
Chester Kiwanis Historical Park (Planned)	BB/12	Chesterfield	VA
Ettrick Park & Mayes-Colbert Ettrick Community Building	CC/20	Chesterfield	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
Town of La Crosse Playground*	I/83	Mecklenburg	VA
Franklinton Elementary School	S/128	Franklin	NC
Neuse River Greenway*	U/141	Wake	NC
Simms Branch Greenway Expansion (Proposed) *	U/142-143	Wake	NC
Marsh Creek Greenway Expansion (Proposed)*	V/145	Wake	NC
Middle Crabtree Creek Greenway	V/148	Wake	NC

* Identified subsequent to publication of the Richmond to Raleigh Project Tier II DEIS.

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 Project will 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 FALLING CREEK PARK EXPANSION (VA)

Chesterfield County has acquired property just north of Falling Creek and east of Jefferson Davis Highway to use for a public park, expanding on the Falling Creek Ironworks Park directly south of the creek. The park expansion (known as Falling Creek Park – Adjacent Property Acquisition) will be constructed by the end of 2015 to include walking trails, observation areas, interpretive signage, work to preserve mill ruins, and enhancement of streamside habitat. Connections between north end trails, south bank park facilities and pedestrian access to the existing parking lot and visitor's center area south of the request property will be constructed by the end of 2015.

5.2.5 FALLING CREEK IRONWORKS PARK (VA)

Chesterfield County is constructing a park at the site of the Falling Creek Ironworks, the first ironworks in English North America. The target date for completion is the end of 2015. The Project will include a half-mile trail, interpretative signage, a parking lot, and an engineering study to preserve an old stone bridge on Route 1. The Project will provide public access to the ironworks site and the remnants of an old grist mill across the creek. The Virginia Company of London built an iron-making furnace on the site in 1619, creating the first heavy industry in the New World. The ironworks were destroyed in 1622 during a Native American uprising.

5.2.6 JAMES RIVER GREENWAY (KINGSLAND CREEK) (PLANNED) (VA)

Chesterfield County plans to develop a greenway on the north side of Kingsland Creek in the vicinity of the Defense Supply Center Richmond (DSCR) in Bellwood. The planned greenway will accommodate the planned development of the James River Greenway trail system.

5.2.7 CHESTER LINEAR PARK EXPANSION (PLANNED) (VA)

Chesterfield County currently operates Chester Linear Park, a strip of land situated in the Chester Village area. This land was formerly a railroad right-of-way that has been adapted for trail use. The park currently includes 0.68 miles of walking trail. The County plans to extend the park across the existing CSX railroad right of way as part of the planned development of the County's Linear Park and Trails Master Plan.

5.2.8 CHESTER KIWANIS HISTORICAL PARK (PLANNED) (VA)

In 2008, the Kiwanis Club of Chester donated the property at 4001 Gill Street in Chester, VA, to Chesterfield County for development known 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.

5.2.9 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.

5.2.10 APPOMATTOX RIVERFRONT TRAIL (PLANNED) (VA)

A portion of the planned Appomattox / Chester Linear Park is being developed 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 behind Randolph Farm, a part of Virginia State University (VSU). The project is currently in the design phase.

5.2.11 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.

5.2.12 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.

5.2.13 TOBACCO HERITAGE TRAIL (VA)

The Tobacco Heritage Trail, a rails-to-trails corridor being developed 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 Project corridor in the vicinity of Second Avenue. Within La Crosse, VA, the trail follows the abandoned Norfolk Southern line and crosses the Project corridor in the vicinity of Central Avenue.

5.2.14 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.

5.2.15 TOWN OF LA CROSSE PLAYGROUND (VA)

The Town of La Crosse, VA, operates a playground on a vacant parcel at the intersection of College Street and Central Avenue, just south of the historic La Crosse Hotel. The playground is in a fenced-in area and is open to the public during daylight hours. Although the entire parcel was donated to the Town, FRA considers only the enclosed playground to be a Section 4(f) resource.

5.2.16 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.

5.2.17 NEUSE RIVER GREENWAY (NC)

The portion of the Neuse River Greenway in Raleigh, NC, that crosses the rail corridor was constructed in 2011. This segment, the Upper Neuse Greenway, provides connections from the Falls Canoe Launch and Falls Lake Recreation Area at Falls of Neuse Road to the soccer complex on Perry Creek Road. The greenway is a component of the Neuse River Regional Park Master Plan, adopted by the City of Raleigh in 1996. The greenway crosses the corridor just west of where it crosses Capital Boulevard (north of Durant Road).

5.2.18 SIMMS BRANCH GREENWAY EXPANSION (PROPOSED) (NC)

The proposed Simms Branch Greenway corridor crosses the rail corridor between Gresham's Lake Road and Durant Road in Raleigh, NC. The City of Raleigh has existing greenway property on either side of the rail corridor and constructed trail near each side of the corridor.

5.2.19 MARSH CREEK GREENWAY EXPANSION (PROPOSED) (NC)

The proposed Marsh Creek Greenway corridor crosses the proposed rail line just north of Millbrook Road in Raleigh, NC. The City of Raleigh currently has greenway easement on either side of the existing rail corridor.

5.2.20 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 rail 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 FEIS describes the historic architecture resources within the Area of Potential Effects (APE) of the 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. An asterisk denotes resources identified subsequent to publication of the Richmond to Raleigh Project Tier II DEIS. More detailed information can be found in Section 3.12 of this FEIS. Correspondence with the Virginia Department of Historic Resources (VDHR) and North Carolina State Historic Preservation Office (NC-HPO) is included in Appendix K.

It should be noted that one historic resource described in the Richmond to Raleigh Project Tier II DEIS was subsequently determined by NC-HPO to no longer be eligible for the NRHP. The Commercial Block at 524-530 Hillsborough Street in Raleigh, NC (referred to as “National Art Interiors” in the Richmond to Raleigh Project Tier II DEIS), lacks sufficient integrity to be eligible for the NRHP due to alterations to the first-floor storefronts and the interior of the property. Therefore, it is no longer included in the Section 4(f) Evaluation.

Table 5-2 Historic Architecture Resources in the Project Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Seaboard Air Line Railroad Corridor	AA-L/ all VA	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
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

Table 5-2 Historic Architecture Resources in the Project Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Manchester Industrial 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
Sheffields; Auburn Chase; Bellwood; Building 42 - DSCR Officer's Club; New Oxford (LD)	AA/8	Chesterfield	Listed/B, C	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

Table 5-2
Historic Architecture Resources in the Project Corridor - Virginia

Resource Name	Section(s)/ Mapsheet(s)	County	Status/Criteria	Description
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 (LD)	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 (LD)	BB/10	Chesterfield	Eligible/C	Circa 1840, two-story single family dwelling with slave quarters and a kitchen
Centralia Earthworks*	BB/10	Chesterfield	Eligible/A, C; Potentially Eligible/D	Earthworks built in 1862 as part of the Confederate outer defensive for Drewry's Bluff; associated with the battle at Wooldridge's Hill and the Bermuda Hundred Campaign; example of Civil War military engineering
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)
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

Table 5-2 Historic Architecture Resources in the Project Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
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
Appomattox River Railroad Bridge*	CC/24	Petersburg	Eligible/A, C	Built 1915, open steel, deck-plate-girder bridge with 11 steel latticework bents; of the three railroad bridges that crossed the Appomattox River into Petersburg during the first half of the twentieth century, it is the only one that survives
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 Project 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
Fort Davis Earthworks*	DD/34	Dinwiddie	Eligible/A, C; Potentially Eligible/D	Civil War era earthworks constructed by Union troops in 1864 during the Siege of Petersburg; good physical integrity
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 of McKenney (referred to as Bank Building in Richmond to Raleigh Project Tier II DEIS)	C/50	Dinwiddie	Eligible/A	Circa 1906 commercial building; one of the few surviving early banks associated with the trend of small communities opening banks and one of earliest banks in all of Dinwiddie County
Chesapeake and Potomac Telephone Company (C & P) Building*	C/50	Dinwiddie	Eligible/A, C	Circa mid-1920s industrial building; represents a time when the telephone forever changed communication; excellent example of elaborate local telephone company building with notable percentage of original elements intact

Table 5-2 Historic Architecture Resources in the Project Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Mayton House	C/51	Dinwiddie	Eligible/C	Circa 1905, example of early twentieth-century vernacular Colonial Revival domestic architecture
Zehmer Farm/Honeymoon Hill Farm	C/51	Dinwiddie	Listed/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
House/458 Second Avenue*	E/66	Brunswick	Eligible/C	Circa 1924 Craftsman style house, rare example of an unmodified kit dwelling
Orgain House*	G/73	Brunswick	Eligible/A, C, D	Circa 1840 Tudor Revival dwelling; associated with regional landscape changes and the cultural memory of a single family struggling to maintain their familial land in a rapidly-changing economic environment; contains above-ground remnants of original mid-nineteenth century plantation complex
Tourist Guest House	G/74	Brunswick	Eligible/C	Circa 1926, Craftsman-style tourist house
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

Table 5-2 Historic Architecture Resources in the Project Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
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
La Crosse Hotel*	I/83	Mecklenburg	Listed/A, C	Early 20th century small town railroad hotel with excellent integrity; occupies a prominent position across the tracks from the former location of the Seaboard Air Line depot and the main commercial strip in La Crosse
Wright Farmstead	J/84-85	Mecklenburg	Potentially 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
Bracey Depot*	K/89	Mecklenburg	Eligible/A, C, Consideration B (as a moved property)	Rare surviving example of an early-twentieth century depot with much of its original architectural elements; associated with large county-wide, state-wide, and nation-wide trend of development of railroad across the American landscape in the second half of the nineteenth century and early-twentieth century

Table 5-2 Historic Architecture Resources in the Project Corridor - Virginia				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Bracey & Company Store*	K/89	Mecklenburg	Eligible/A, C	Circa 1917 commercial building; excellent example of an important early-twentieth century type of commerce that was common in rural areas though the US; rare intact example of vernacular commercial form of architecture
Granite Hall/Fitts House	L/92-93	Mecklenburg	Eligible/C	Circa early 20th century, example of Classical Revival architecture

* Identified subsequent to publication of the Richmond to Raleigh Project Tier II DEIS.

Source: *Berger, 2005; Dovetail (see Appendix K for list of Dovetail reports).*

Table 5-3 Historic Architectures Resources in the Project 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

Table 5-3 Historic Architectures Resources in the Project Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Marshall House/Tavern (House No 245) *	M/102	Warren	Eligible/C	Early timber-framed structure, which has been expanded over time to become one of the largest dwellings in the vicinity of Ridgeway; unique example of Colonial, vernacular, and Folk Victorian architecture in Warren County; associated with the planning and development of the town of Ridgeway and the Ridgeway Company
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
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
Vance County Courthouse*	P/115	Vance	Listed/A, C	1884 and 1908 Neoclassical Revival courthouse

Table 5-3 Historic Architectures Resources in the Project Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Zollicoffer's Law Office*	P/115	Vance	Listed/A, B, C	1887 small brick Victorian commercial building; landmark of downtown Henderson; one of the best preserved reminders of the town's post-Civil War prosperity; associated with the A. C. Zollicoffer, who was prominent in local and regional legal, political, and business circles
Henderson Fire Station and Municipal Building*	P/115	Vance	Listed/A, C	1908 brick firehouse with tower; associated with early 20th century improvement of municipal service and safety, and improved firefighting efforts
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

Table 5-3 Historic Architectures Resources in the Project Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
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
Hedgepetch and Finch Store	Q/121	Vance	Eligible/A, C	Late 19th century general merchandise store; marshalling point for agricultural products
Kittrell Residential Historic District*	Q/121	Vance	Eligible/A, C	Circa 1865-1960, district of historic houses embodying diversity in style, scale, and lot size that illustrate the Town of Kittrell's small population and relatively slow pace at which this area was developed; reflects the efforts of several local merchants and companies to use their proximity to the Raleigh and Gaston Railroad and other area roadways to an economic benefit; associated with important events at the local level, such as the establishment of the Raleigh and Gaston Railroad and the broad impacts it made on Kittrell's economic and socio-cultural development by extension
Josiah Crudup House*	Q/123	Vance	Listed/C	1830s Federal 2-story tripartite frame house; circa 1900 expansion
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

Table 5-3
Historic Architectures Resources in the Project Corridor – North Carolina

Resource Name	Section(s)/ Mapsheet(s)	County	Status/Criteria	Description
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
Aldridge H. Vann House*	S/127	Franklin	Listed/C	Built 1918, Classical Revival 2-story brick house
Franklinton Depot*	S/127	Franklin	Listed/A, C	Built 1886, Raleigh & Gaston Railroad frame depot, associated with one of North Carolina's s first and most important railroads and with the development of the Town of Franklinton
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 (LD)	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
Wake Forest Historic District (LD)	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

Table 5-3 Historic Architectures Resources in the Project Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
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
Purefoy-Chappell House and Outbuildings*	U/137	Wake	Listed/C	Built 1838 and 1895 2-story frame house and outbuildings
Oakforest (LD)*	U/138	Wake	Listed/C	Circa 1807, Federal style hall and parlor home; various additions during the nineteenth century converted it into a Greek Revival house
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
Gulf Petroleum Products Warehouse*	V/148	Wake	Eligible/A, C	Circa 1926 warehouse with utilitarian, small-scale, industrial architecture; associated with commerce and industry in Wake County during the period between the World Wars; reflects a larger historic trend for oil and gas companies to establish distribution centers for gasoline and other petroleum products adjacent to major railroads following the exponential growth in automobiles across the country after the end of World War I
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

Table 5-3 Historic Architectures Resources in the Project Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
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 (LD)	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
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 (LD)	V/149	Wake	Eligible/A, C	Circa 1890, illustrates the rise of the textile industry; typifies the small-scale textile mills of the period

Table 5-3 Historic Architectures Resources in the Project Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Pine State Creamery (LD)	V/150	Wake	Listed/A, C	Built 1928, dairy farmers' cooperative; Art Moderne building
Seaboard Coast Line Railroad Company Office Building (LD)*	V/150	Wake	Listed/C	Built 1861, brick commercial building with restrained Italianate design
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 (LD)	V/150	Wake	Listed/A	Built 1910 primarily to power the city's electric streetcar system
Carolina Power and Light Company Car Barn and Automobile Garage (LD)	V/150	Wake	Listed/A, C	Built 1925, housed and repaired the company's streetcars and service vehicles; Art Deco style garage
St. Paul A.M.E. Church (LD)*	V/150	Wake	Listed/A, B, C	Built 1909, Gothic Revival brick church, constructed by the first independent African-American congregation of Raleigh, ministers were influential leaders of African-American community during Reconstruction
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
Depot Historic District Expansion Area*	V/150	Wake	Eligible/A, C	Ten additional warehouses and commercial buildings and their associated tax parcels that abuts the northwest side of the existing historic district; they form a cohesive collection of resources that contribute to the industrial and commercial significance of the historic district during its period of significance.

Table 5-3 Historic Architectures Resources in the Project Corridor – North Carolina				
Resource Name	**Section(s)/ Mapsheet(s)**	**County**	**Status/Criteria**	**Description**
Montfort Hall (LD)*	V/150-151	Wake	Listed/C	1858 Italianate-style plantation home located at the northern entrance to the Boylan Heights Historic District ; one of the few mansions in Raleigh that survived during the American Civil War era
Boylan Heights Historic District (LD)	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
Joel Lane House (LD)*	V/150-151	Wake	Listed/A, B, C	Built in late 1760s; manor plantation house overlooking the future site of Raleigh; associated with Joel Lane who was a member of the colonial General Assembly, lobbied to create Wake County, and was directly involved in the decision to locate the permanent capital of the state in Wake County; during the Revolutionary War, house was the site of important government meetings, both formal and informal; National Society of Colonial Dames of America in the State of North Carolina continues to operate this Raleigh Historic Landmark as a house museum
Boylan Apartments (LD)*	V/150-151	Wake	Listed/A, C	Built 1935, three-story brick Colonial Revival apartments
Raleigh Hosiery Company Building	V/151	Wake	Eligible/A	Circa 1900,illustrates the small-scale industrial and warehousing properties built along the rail lines
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

Table 5-3
Historic Architectures Resources in the Project Corridor – North Carolina

Resource Name	Section(s)/ Mapsheet(s)	County	Status/Criteria	Description
Governor Morehead School Historic District*	V/151	Wake	Eligible/A, C	The North Carolina Institution of the Deaf and Dumb and Blind (now the Governor Morehead School) opened in 1845 and moved to its current location in 1923; significant state-wide for its role in the training of blind, white students in North Carolina; well-preserved collection of Colonial Revival scholastic architecture
Raleigh and Gaston Railroad Corridor	M-V/all NC	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; Dovetail (see Appendix K for list of Dovetail reports).

* Identified subsequent to publication of the Richmond to Raleigh Project Tier II DEIS.

LD - Also a locally-designated historic site.

5.4 DESCRIPTION OF THE 4(F) RESOURCES – BATTLEFIELDS

Section 3.12.2.2 of the Richmond to Raleigh Project Tier II DEIS describes the battlefields within the APE of the 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 to VDHR for the 10 battlefields within the Project APE in July 2009. VHDR disagreed with these boundaries. 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 Project 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

Section 4(f) applies to all archaeological sites that are listed or eligible for inclusion in the NRHP and warrant preservation in place. As stated in 23 CFR 774.13(b), Section 4(f) does not apply to archeological sites where the Federal agency, after consultation with the SHPO and 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." Archaeological sites that meet the aforementioned criteria are considered Section 4(f) resources regardless of whether or not the historic resource is publicly owned or open to the public.

This section identifies the NRHP eligibility determinations for archaeological sites within the APE for the Preferred Alternative, and describes the evaluations of whether the eligible sites warrant preservation in place. As discussed in the draft Section 4(f) Evaluation in the Richmond to Raleigh Project Tier II DEIS, the Project used a phased approach to determine the eligibility of archaeological sites within the APE per 36 CFR 800.4(b)(2). For the Richmond to Raleigh Project Tier II DEIS, archaeologists completed Phase I investigations to determine previously recorded archaeological sites and identify additional archaeological resources within the APE. After the selection of the Preferred Alternative, archaeologists completed Phase II investigations to determine the eligibility of archaeological resources along the Preferred Alternative for the NRHP. These studies identified 17 archaeological resources listed in or eligible for the NRHP, all of which are located in Virginia (Table 5-5). Several of these resources are associated with historic architecture resources, and the potential Section 4(f) impacts to those resources are included in the associated historic architecture discussions.

Table 5-5
Archaeological Sites in the Preferred Alternative APE Listed in or Eligible for the NRHP

Resource Name	Section	Associated with Historic Architecture Resource	NHRP Eligibility Criteria	Section 4(f) Applies (Merits Preservation in Place)
Williams Bridge Company	AA	Yes	A, C, D	Yes
Falling Creek Ironwork	AA	No	D	No
USDOD Supply Center District	AA	Yes	A, B, C, D	Yes
Centralia Earthworks	BB	Yes	A, C, D (potential)	Yes
Chester Hotel Site	BB	No	A, D	No
Swanee Site	BB	No	D	No
Site 44CF0707	BB, CC	No	D	No
Arrowfield Plantation	CC	No	A, D	No
Site 44CF0710	CC	No	D	No
Battersea	CC	Yes	A, B, C, D	Yes
Dimmock Line/Earthworks	CC	Yes	A, B, C, D (potential)	Yes
Fort Davis Earthworks	DD	Yes	A, C, D (potential)	Yes
Orgain House	G	Yes	A, C, D	Yes
Oak Shades House Site	G	No	D	No
Davis Site	H	No	A, D	No
La Crosse Hotel	I	Yes	A, C, D	Yes

Table 5-5 Archaeological Sites in the Preferred Alternative APE Listed in or Eligible for the NHRP				
Resource Name	**Section**	**Associated with Historic Architecture Resource**	**NHRP Eligibility Criteria**	**Section 4(f) Applies (Merits Preservation in Place)**
Wright Farmstead	J	Yes	Potentially A, C, D	Potentially

Table 5-5 indicates whether FRA has determined, in consultation with ACHP and VDHR, that the archeological sites are chiefly important for what can be learned from data recovery investigations and whether they have any have value for preservation in place. The nine sites associated with above-ground historic architecture resources listed in or eligible for the NRHP are assumed to warrant preservation in place. Of the remaining archaeological resources, those determined eligible for the NRHP under only Criterion D (eligible solely because of their potential to yield information important in prehistory or history) were determined not to merit preservation in place. The remaining three archaeological sites were then evaluated to determine whether the archeological sites are chiefly important for what can be learned from data recovery investigations and whether they merit preservation in place. This evaluation yielded the following:

5.5.1 CHESTER HOTEL SITE

The Chester Hotel Site is a mid-nineteenth through early-twentieth century site representing many occupations ranging from the Chester Hotel to its transformation to a domestic residence and doctor's office in the 1930s. The site has the potential to reveal information on the early years of Chester. As an archaeological resource, the Chester Hotel Site is chiefly important because of what can be learned by data recovery and has minimal value for preservation in place. On the basis of this qualification, Section 4(f) does not apply to the Chester Hotel Site.

5.5.2 ARROWFIELD PLANTATION

This site contains the archaeological remains of Arrowfield, an early-nineteenth through mid-twentieth century farmstead with a prehistoric component dating to the Middle Woodland and Late Archaic Periods. The site has the potential to yield a plethora of data on Antebellum Chesterfield County, VA. As an archaeological resource, the Arrowfield Plantation is chiefly important because of what can be learned by data recovery and has minimal value for preservation in place. On the basis of this qualification, Section 4(f) does not apply to Arrowfield Plantation.

5.5.3 DAVIS SITE

The Davis Site is a mid-nineteenth through early-twentieth century domestic site, likely occupied around 1914 by Charlie Davis, an African American resident. The site has the potential to reveal information on rural domestic sites and/or settlement patterns in the Piedmont during the Reconstruction and Growth Period (1865–1917) and the World War I and World War II Period (1917–1945). This also has the potential to reveal significant data on nineteenth century domestic life in Brunswick County, VA. As an archaeological resource, the Davis Site is chiefly important because of what can be learned by data recovery and has minimal value for preservation in place. On the basis of this qualification, Section 4(f) does not apply to the Davis Site.

Based on the above evaluation, there are no archaeological resources in the Project APE (other than those associated with a historic architecture resource) that are protected by Section 4(f).

Impacts to archaeological resources that are associated with historic architecture resources are described in Section 5.7.

5.6 SECTION 4(F) PROPERTY IMPACTS – PARKS, RECREATION AREAS, WILDLIFE REFUGES

The Project alternatives will require a *de minimis* Section 4(f) use of eight public parks or trails as listed in Table 5-6 and described below, with the Tobacco Heritage trail used in two locations. *De minimis* concurrence letters are included in Appendix L. The Preferred Alternative is identified in **bold**.

Table 5-6
Section 4(f) Determinations for Parks, Recreation Areas, and Wildlife Refuges
(Preferred Alternative Identified in Bold)

Resource Name	Section	VA1/NC1 Section 4(f) Use	VA2/NC2 Section 4(f) Use	VA3/NC3 Section 4(f) Use	VA4/NC5 Section 4(f) Use
Richmond Canal Walk	AA	**No Use**	No Use	No Use	N/A
James River Park System – Slave Trail	AA	**Use, *De Minimis***	Use, *De Minimis*	Use, *De Minimis*	N/A
Thomas B. Smith Community Center	AA	**Use, *De Minimis***	Use, *De Minimis*	Use, *De Minimis*	N/A
Falling Creek Park Expansion	AA	**No Use**	No Use	No Use	N/A
Falling Creek Ironworks Park	AA	**No Use**	No Use	No Use	N/A
James River Greenway (Kingsland Creek) (Planned)	AA	**No Use**	No Use	No Use	N/A
Chester Linear Park Expansion (Planned)	BB	**No Use**	No Use	No Use	N/A
Chester Kiwanis Historical Park (Planned)	BB	**No Use**	No Use	No Use	N/A
Ettrick Park & Mayes-Colbert Ettrick Community Building	CC	**No Use**	No Use	No Use	N/A
Appomattox Riverfront Trail (Planned)	CC	**Use, *De Minimis***	Use, *De Minimis*	Use, *De Minimis*	N/A
Upper Appomattox Canal Trail	CC	**Use, *De Minimis***	Use, *De Minimis*	Use, *De Minimis*	N/A
Petersburg National Battlefield (Fort Wadsworth Unit)	DD	Use, *De Minimis*	Use, *De Minimis*	**Use, *De Minimis***	N/A
Tobacco Heritage Trail (resource spans sections)	E	**Use, *De Minimis***	Use, *De Minimis*	Use, *De Minimis*	N/A
	I	**Use, *De Minimis***	Use, *De Minimis*	Use, *De Minimis*	N/A
Centennial Park	I	**Use, *De Minimis***	Use, *De Minimis*	Use, *De Minimis*	N/A
Town of La Crosse Playground	I	**No Use**	No Use	No Use	N/A
Franklinton Elementary School	S	**No Use**	No Use	No Use	N/A
Neuse River Greenway	U	**No Use**	No Use	No Use	N/A

Table 5-6
Section 4(f) Determinations for Parks, Recreation Areas, and Wildlife Refuges
(Preferred Alternative Identified in Bold)

Resource Name	Sec-tion	VA1/NC1 Section 4(f) Use	VA2/NC2 Section 4(f) Use	VA3/NC3 Section 4(f) Use	VA4/NC5 Section 4(f) Use
Simms Branch Greenway Expansion (Proposed)	U	**No Use**	No Use	No Use	N/A
Marsh Creek Greenway Expansion (Proposed)	V	No Use	No Use	No Use	**No Use**
Middle Crabtree Creek Greenway	V	Use, *De Minimis*	Use, *De Minimis*	Use, *De Minimis*	**Use, *De Minimis***

5.6.1 RICHMOND CANAL WALK (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives (VA1, VA2, and VA3) will 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 R, mapsheet 1). No ROW from the Canal Walk will 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 the Richmond to Raleigh Project should not alter the character, setting, or use of the Canal Walk. Therefore, the Preferred Alternative (and VA2 and VA3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.2 JAMES RIVER PARK SYSTEM – SLAVE TRAIL (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives (VA1, VA2, and VA3) will 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 R, 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 will 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 for all Project alternatives.

5.6.3 THOMAS B. SMITH COMMUNITY CENTER (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives (VA1, VA2, and VA3) will provide a railroad bridge over Ruffin Road just west of the Thomas B. Smith Community Center and Park (Appendix R, mapsheet 4). This bridge will ensure the safety of automobiles crossing the rail 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 will 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 will 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 for all Project alternatives.

5.6.4 FALLING CREEK PARK EXPANSION (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives (VA1, VA2, and VA3) are on common alignment in the vicinity of the Falling Creek Park Expansion (Appendix R, mapsheet 6). Although the Richmond to Raleigh Project rail designs are located within the existing CSX railroad corridor and will not impact the park, the proposed grade separation of Station Road will relocate Station Road onto the parcel where the park is planned. The designs for the grade separation of Station Road have been altered from what was presented in the Richmond to Raleigh Project Tier II DEIS to no longer require ROW from within the proposed "Resource Protection Area" for the park as shown on the rendered site plan provided by Chesterfield County to the Project Team in June 2012.

The existing rail lines in this area have daily freight and passenger rail traffic that can be heard and seen from the proposed location of the trail. In addition, there is vehicular traffic along Jefferson Davis Highway immediately adjacent to the proposed park. The addition of the Richmond to Raleigh Project rail and road improvements should not alter the character, setting, or use of the trail. Therefore, the Preferred Alternative (and VA2 and VA3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.5 FALLING CREEK IRONWORKS PARK (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives (VA1, VA2, and VA3) are located within the existing CSX railroad corridor where it crosses through Falling Creek Ironworks Park (Appendix R, mapsheet 6). The Richmond to Raleigh Project alternatives will cross Falling Creek on the existing structure and will not require any new ROW. The existing rail lines in this area have daily freight and passenger rail traffic that can be heard and seen from the Falling Creek Ironworks Park. The addition of the Project should not alter the character, setting, or use of the park. Therefore, the Preferred Alternative (and VA2 and VA3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.6 JAMES RIVER GREENWAY (KINGSLAND CREEK) (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives (VA1, VA2, and VA3) will add an additional railroad track within the existing CSX railroad corridor in the location where the planned greenway on the north side of Kingsland Creek will cross (Appendix R, mapsheet 8). Chesterfield County has not yet obtained a legal crossing of the active railroad corridor in this area. Therefore, the proposed changes associated with the Project will not create a barrier to the development of the trail (because that barrier already exists). The existing rail lines in this area have daily freight and passenger rail traffic that can be heard and seen from the proposed location of the trail. The addition of the Richmond to Raleigh Project track should not alter the character, setting, or use of the trail. Therefore, the Preferred Alternative (and VA2 and VA3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.7 CHESTER LINEAR PARK EXPANSION (PLANNED) (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. All three of the proposed Project alternatives (VA1, VA2, and VA3) will add an additional railroad track within the existing CSX railroad corridor in the location where the planned expansion of Chester Linear Park will cross (Appendix R, mapsheet 11). Chesterfield County has not yet obtained a legal crossing of the active railroad corridor in this area. Therefore, the proposed changes associated with the Project will not create a barrier to the expansion of Chester Linear Park (because that barrier already exists). The existing rail lines in this area have daily freight and passenger rail traffic that can be heard and seen from the proposed location of the expanded Chester Linear Park. The addition of the Richmond to Raleigh Project track should not alter the character, setting, or use of the trail. Therefore, the Preferred Alternative (and VA2 and VA3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.8 CHESTER KIWANIS HISTORICAL PARK (PLANNED) (VA)

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

5.6.9 ETTRICK PARK & MAYES-COLBERT ETTRICK COMMUNITY BUILDING (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. 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 R, mapsheet 20). None of the proposed Project alternatives will 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 the Richmond to Raleigh Project should not alter the character, setting, or use of the park. Therefore, the Preferred Alternative (and VA2 and VA3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.10 APPOMATTOX RIVERFRONT TRAIL (PLANNED) (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. All three of the proposed Project alternatives (VA1, VA2, and VA3) will construct a new rail bridge over the Appomattox River, immediately adjacent to the existing rail bridge near Virginia State University (Appendix R, mapsheet 24). The bridge will be located just to the east of the existing bridge and will 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 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 will not adversely affect the activities, features, and attributes that

qualify the resource for protection under Section 4(f), with the stipulation that the Richmond to Raleigh Project 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 for all Project alternatives.

5.6.11 UPPER APPOMATTOX CANAL TRAIL (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. All three of the proposed Project alternatives (VA1, VA2, and VA3) will construct a new rail bridge over the Appomattox River, immediately adjacent to the existing rail bridge near Virginia State University (Appendix R, 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 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 will 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 Richmond to Raleigh Project Tier II DEIS. Therefore, FRA has made a *de minimis* determination for this resource for all Project alternatives.

5.6.12 PETERSBURG NATIONAL BATTLEFIELD (FORT WADSWORTH UNIT) (VA)

The VA3 Project alternative is the Preferred Alternative in Section DD. All three of the proposed Project alternatives (VA1, VA2, and VA3) will 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 R, 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 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 Project will 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 for all Project alternatives.

5.6.13 TOBACCO HERITAGE TRAIL (VA)

The VA1 Project alternative is the Preferred Alternative in Section E and Section I. All three of the proposed Project alternatives (VA1, VA2, and VA3) will cross the Tobacco Heritage Trail in the Towns of Alberta and La Crosse, VA (Appendix R, mapsheets 66 and 83, respectively). In Alberta, VA, the Project will 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, will require ROW from the trail. In La Crosse, VA, the Project will re-route the Tobacco Heritage Trail north along Main Street approximately 300 feet, where it will then cross under the proposed rail alignment, and rejoin the existing rails-to-trails corridor. The Project Team worked with representatives from both towns and the RRRT

in the development of the designs to ensure that the Project will 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 will 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 for all Project alternatives.

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

5.6.14 CENTENNIAL PARK (VA)

The VA1 Project alternative is the Preferred Alternative in Section I. All three of the proposed Project alternatives (VA1, VA2, and VA3) will 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 R, mapsheet 83). The Project will provide a new pedestrian underpass along the Tobacco Heritage Trail, approximately 300 feet to the north along Main Street, which will allow trail users to cross under the proposed rail alignment and rejoin the existing rails-to-trails corridor. Although the new rail traffic will 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 will 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 for all Project alternatives.

5.6.15 TOWN OF LA CROSSE PLAYGROUND (VA)

The VA1 Project alternative is the Preferred Alternative in Section I. All three of the proposed Project alternatives (VA1, VA2, and VA3) will rebuild rail through the Town of La Crosse within the existing rail corridor, close the existing at-grade crossing at Main Street, and provide a new grade-separated crossing of the existing CSX rail corridor approximately 500 feet south of the existing crossing (Appendix R, mapsheet 83). The Project will make improvements to Central Avenue and College Street in the vicinity of the playground in order to provide a connection to the new grade separation. Although a construction easement may be required that will temporarily require removal of a small portion of the playground fencing, no ROW will be permanently required from the playground. Although the new rail traffic will be heard from the

park, it is in character with its rail theme; therefore, the Preferred Alternative (and VA2 and VA3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.16 FRANKLINTON ELEMENTARY SCHOOL (NC)

The NC1 Project alternative is the Preferred Alternative in Section S. All three of the proposed Project alternatives (NC1, NC2, and NC3) will 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 R, mapsheet 128). However, no land will be required from the school and the pedestrian access will have no effect on the use of its facilities. Therefore, the Preferred Alternative (and NC2 and NC3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.17 NEUSE RIVER GREENWAY (NC)

The NC1 Project alternative is the Preferred Alternative in Section U. All three of the proposed Project alternatives (NC1, NC2, and NC3) will cross over the Neuse River Greenway. No ROW from the greenway will be required. The existing rail line in this area has daily freight traffic that can be heard and seen from the greenway. The addition of the Richmond to Raleigh Project should not alter the character, setting, or use of the greenway. In addition, the Richmond to Raleigh Project bridge at this location will have a covered deck, which will meet the requirements from the City requesting a protected cover to protect patrons from falling debris. Therefore, the Preferred Alternative (and NC2 and NC3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.18 SIMMS BRANCH GREENWAY EXPANSION (PROPOSED)

The NC1 Project alternative is the Preferred Alternative in Section U. All three of the proposed Project alternatives (NC1, NC2, and NC3) will cross the proposed location of the Simms Branch Greenway within the existing, active railroad corridor. The City of Raleigh has not yet obtained a legal crossing of the corridor at this location. Therefore, the proposed changes associated with the Project will not create a barrier to the development of the Simms Branch Greenway (because that barrier already exists). The City could route the greenway south to Gresham Lake Road or north to Durant Road to cross the existing CSX rail corridor. Gresham Lake Road and Durant Road will both be grade-separated (road over rail) with the Project, and the bridges will accommodate bikes and pedestrians. The existing rail lines in this area have daily freight and passenger rail traffic that can be heard and seen from the proposed location of the proposed location of the greenway. The addition of the Richmond to Raleigh Project track should not alter the character, setting, or use of the trail. Therefore, the Preferred Alternative (and NC2 and NC3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.19 MARSH CREEK GREENWAY EXPANSION (PROPOSED)

The NC5 Project alternative is the Preferred Alternative in Section V. All four of the proposed Project alternatives (NC1, NC2, NC3, and NC5) will cross the proposed location of the Marsh Creek Greenway within the existing, active railroad corridor. The City of Raleigh has not yet obtained a legal crossing of the corridor at this location. Therefore, the proposed changes associated with the Project will not create a barrier to the development of the Marsh Creek Greenway (because that barrier already exists). The City could route the greenway south to Millbrook Road to cross the existing CSX rail corridor. Millbrook Road will be grade-separated (road under rail) with the Project, and the underpass will accommodate bikes and pedestrians. The existing rail lines in this area have daily freight and passenger rail traffic that can be heard and seen from the proposed location of the proposed location of the greenway. The addition of

the Richmond to Raleigh Project track should not alter the character, setting, or use of the trail. Therefore, the Preferred Alternative (and NC1, NC2, and NC3) will have no effect on this resource and will not constitute a Section 4(f) use of the resource.

5.6.20 MIDDLE CRABTREE CREEK GREENWAY (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. All four of the proposed Project alternatives (NC1, NC2, NC3, and NC5) will construct a new single track bridge adjacent to the existing rail bridge that spans Crabtree Creek and Hodges Street in Raleigh, NC (Appendix R, mapsheet 148). The new rail bridge will provide an additional track that is necessary to accommodate the high speed trains associated with the 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 will 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 will need to be addressed. Therefore, FRA has made a *de minimis* determination for this resource for all Project alternatives.

5.7 SECTION 4(F) PROPERTY IMPACTS – HISTORIC ARCHITECTURE SITES

Of the 131 historic architecture resources (excluding the 10 battlefields) determined to be eligible for listing or listed in the NRHP within the Project corridor, 76 will have property impacts or proximity impacts from one or more of the Project alternatives (Tables 5-7 and 5-8). None of the Project alternatives will have an effect on the remaining 55 resources under Section 106 of the National Historic Preservation Act (NHPA) (36 CFR Part 800) nor will they require the acquisition of any ROW from any of these properties. There is no Section 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 5-7 and 5-8, 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 5-7 through 5-8 are ordered from north to south as they appear in the Richmond to Raleigh Project Study Area. The Preferred Alternative is identified in **bold**. For resources that span more than one section of the project, all portions of the Preferred Alternative crossed by the resource are identified in bold.

The VDHR concurred with the determinations in a letter dated July 29, 2014. The VDHR concurred with *de minimis* findings in a separate letter dated July 10, 2014.

The NC-HPO concurred with the determinations of effect for resources in North Carolina in a meeting held June 17, 2013, and signed a form confirming these effects on August 14, 2013. This form included concurrence with *de minimis* findings.

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

Table 5-7
Section 4(f) Determinations for Historic Architecture Resources – Virginia
(Preferred Alternative Identified in Bold)

Resource Name	Section	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use	VA4 Section 106 Effect/ Section 4(f) Use
Seaboard Air Line Railroad Corridor (resource spans sections)	AA-L	**Adverse Effect/ Use**	**Adverse Effect/ Use**	**Adverse Effect/ Use**	**Adverse Effect/ Use**
C. & O. & Seaboard Railroad Depot	AA	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Shockoe Valley & Tobacco Row Historic District	AA	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Shockoe Slip Historic District	AA	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
James River and Kanawha Canal Historic District	AA	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Atlantic Coast Line Railroad Corridor (resource spans sections)	AA	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
	BB	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
	CC	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Manchester Industrial Warehouse Historic District	AA	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Williams Bridge Company	AA	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Lucky Strike/RJ Reynolds Tobacco	AA	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Transmontaigne Product Services, Inc.	AA	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Davee Gardens Historic District	AA	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
DuPont Spruance	AA	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Sheffields; Auburn Chase; Bellwood; Building 42 - DSCR Officer's Club; New Oxford	AA	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A

Table 5-7
Section 4(f) Determinations for Historic Architecture Resources – Virginia
(Preferred Alternative Identified in Bold)

Resource Name	Section	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use	VA4 Section 106 Effect/ Section 4(f) Use
USDOD Supply Center Historic District; Bellwood-Richmond Quartermaster Depot Historic District	AA	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Richmond & Petersburg Electric Railway (resource spans sections)	AA	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
	BB	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
	CC	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
House at 3619 Thurston Rd	AA	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Centralia Post Office	BB	**Adverse Effect/ No Use**	Adverse Effect/ No Use	Adverse Effect/ No Use	N/A
Ragland House/4626 Centralia Road	BB	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Circle Oaks/4510 Centralia Road	BB	**Adverse Effect/ No Use**	Adverse Effect/ No Use	Adverse Effect/ No Use	N/A
Centralia Earthworks	BB	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Chester Historic District	BB	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Chester #94 Masonic Lodge	BB	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Pretlow House	BB	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Eichelberger House	BB	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Ellerslie	CC	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Appomattox River Railroad Bridge	CC	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A

Table 5-7
Section 4(f) Determinations for Historic Architecture Resources – Virginia
(Preferred Alternative Identified in Bold)

Resource Name	Section	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use	VA4 Section 106 Effect/ Section 4(f) Use
Battersea	CC	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
North Battersea/Pride's Field Historic District	CC	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Defense Road	CC	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Dimmock Line/Earthworks	CC	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Bridge over Defense Road	CC	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Fort Davis Earthworks	DD	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	N/A
Evergreen	A	No Effect/ No Use	**No Effect/ No Use**	No Effect/ No Use	N/A
Courtworth	C	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Bowen House	C	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
W. Boisseau's Store, Warehouse, Dwelling	C	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Bank of McKenney (referred to as Bank Building in Richmond to Raleigh Project Tier II DEIS)	C	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Chesapeake and Potomac Telephone Company (C & P) Building	C	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Mayton House	C	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Zehmer Farm/Honeymoon Hill Farm	C	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Wynnhurst	D	Adverse Effect/ Use	No Effect/ No Use	Adverse Effect/ Use	**Outside APE/ No Use**
Blick's Store	D	No Effect/ No Use	No Adverse Effect/ Use, *De Minimis*	No Effect/ No Use	**No Adverse Effect/ Use, *De Minimis***

Table 5-7 Section 4(f) Determinations for Historic Architecture Resources – Virginia (Preferred Alternative Identified in Bold)					
Resource Name	**Section**	**VA1 Section 106 Effect/ Section 4(f) Use**	**VA2 Section 106 Effect/ Section 4(f) Use**	**VA3 Section 106 Effect/ Section 4(f) Use**	**VA4 Section 106 Effect/ Section 4(f) Use**
House/458 Second Avenue	E	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Orgain House	G	No Effect/ No Use	No Effect/ No Use	**No Adverse Effect / No Use**	Adverse Effect/ Use
Tourist Guest House	G	No Effect/ No Use	No Effect/ No Use	**Adverse Effect/ Use**	No Adverse Effect/ No Use
Oak Shades	G	Adverse Effect/ Use	Adverse Effect/ Use	**No Effect/ No Use**	No Effect/ No Use
Evans House	H	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Smelley House	I	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
La Crosse Commercial Historic District	I	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
La Crosse Hotel	I	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Wright Farmstead	J	Adverse Effect/ Use	**No Effect/ No Use**	Adverse Effect/ Use	N/A
Sardis Methodist Church	J	No Adverse Effect/ No Use	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	N/A
Bracey Historic District	K	**No Adverse Effect/ No Use**	Adverse Effect/ Use	No Adverse Effect/ No Use	N/A
Bracey Depot	K	**No Adverse Effect/ No Use**	Adverse Effect / Use	No Adverse Effect/ No Use	N/A
Bracey & Company Store	K	**No Adverse Effect/ No Use**	No Adverse Effect / Use, *De Minimis*	No Adverse Effect/ No Use	N/A
Granite Hall/Fitts House	L	**No Effect/ No Use**	Adverse Effect/ Use	No Effect/ No Use	N/A

Table 5-8
Section 4(f) Determinations for Historic Architecture Resources – North Carolina
(Preferred Alternative Identified in Bold)

Resource Name	Section	NC1 Section 106 Effect/ Section 4(f) Use	NC2 Section 106 Effect/ Section 4(f) Use	NC3 Section 106 Effect/ Section 4(f) Use	NC5 Section 106 Effect/ Section 4(f) Use
Warren County Training School	L	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Wise School	L	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
House (East side of US 1, Wise, NC)	M	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Holtzmann Farm	M	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Chapel of the Good Shepherd	M	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Dr. Thomas B. Williams House and Office	M	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Marshall House/Tavern (House No 245)	M	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
William J. Hawkins House	N	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Middleburg Community House (Middleburg Steakhouse)	O	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**	N/A
House (Allison Cooper Rd, Middleburg vicinity)	O	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**	N/A
Holloway Farm	O	Adverse Effect/ Use	Adverse Effect/ Use	**No Effect/ No Use**	N/A
William Haywood Harris Farm	O	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**	N/A
Forrest Ellington Farm	O	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	N/A
R. B. Carter House	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Henderson Historic District and Proposed Boundary Expansion	P	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Vance County Courthouse	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Zollicoffer's Law Office	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A

Table 5-8
Section 4(f) Determinations for Historic Architecture Resources – North Carolina
(Preferred Alternative Identified in Bold)

Resource Name	Sec-tion	NC1 Section 106 Effect/ Section 4(f) Use	NC2 Section 106 Effect/ Section 4(f) Use	NC3 Section 106 Effect/ Section 4(f) Use	NC5 Section 106 Effect/ Section 4(f) Use
Henderson Fire Station and Municipal Building	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Houses (2 bungalows on E Young Ave)	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Mistletoe Villa	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
South Henderson Industrial Historic District	P	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A
Vance Flour Mill (Sanford Milling Co.)	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Houses (5 worker houses on 1400 block of Nicholas St)	P	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Houses (3 side gable houses on 1500 block of Nicholas St)	P	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Esso Gasoline Station	P	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Confederate Cemetery	Q	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Saint James Episcopal Church	Q	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Hedgepetch and Finch Store	Q	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Kittrell Residential Historic District	Q	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Josiah Crudup House	Q	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Person-McGhee Farm (resource spans sections)	Q	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
	R	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Raleigh and Gaston Railroad Bridge Piers (Tar River) (resource spans sections)	Q	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
	R	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Franklinton Historic District (Includes Sterling Mill Historic District)	S	**Adverse Effect/ Use**	Adverse Effect/ Use	Adverse Effect/ Use	N/A

Table 5-8
Section 4(f) Determinations for Historic Architecture Resources – North Carolina
(Preferred Alternative Identified in Bold)

Resource Name	Section	NC1 Section 106 Effect/ Section 4(f) Use	NC2 Section 106 Effect/ Section 4(f) Use	NC3 Section 106 Effect/ Section 4(f) Use	NC5 Section 106 Effect/ Section 4(f) Use
Aldridge H. Vann House	S	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Franklinton Depot	S	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Church (within proposed Franklinton Historic District)	S	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Sterling Cotton Mill	S	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Cedar Creek Railroad Bridge Piers	S	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Youngsville Historic District	T	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
J. B. Perry House	T	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Glen Royall Mill Village Historic District	U	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A
Wake Forest Historic District	U	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Downtown Wake Forest Historic District	U	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Purefoy-Chappell House and Outbuildings	U	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Oakforest	U	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Powell House	U	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Neuse Railroad Station	U	**No Effect/ No Use**	No Effect/ No Use	No Effect/ No Use	N/A
Crabtree Creek Railroad Bridge Pier	V	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***
Gulf Petroleum Products Warehouse	V	Adverse Effect/ Use	Adverse Effect/ Use	Adverse Effect/ Use	**Adverse Effect/ Use**
Raleigh Bonded Warehouse	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**

Table 5-8
Section 4(f) Determinations for Historic Architecture Resources – North Carolina
(Preferred Alternative Identified in Bold)

Resource Name	Section	NC1 Section 106 Effect/ Section 4(f) Use	NC2 Section 106 Effect/ Section 4(f) Use	NC3 Section 106 Effect/ Section 4(f) Use	NC5 Section 106 Effect/ Section 4(f) Use
Mordecai Place Historic District	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Pilot Mill	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Roanoke Park Historic District	V	No Effect/ No Use	No Effect/ No Use	Adverse Effect/ Use	**No Effect/ No Use**
Noland Plumbing Company Building	V	No Effect/ No Use	No Effect/ No Use	No Adverse Effect/ Use, *De Minimis*	**No Effect/ No Use**
John A. Edwards and Company Building	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Glenwood-Brooklyn Historic District	V	No Effect/ No Use	No Effect/ No Use	No Adverse Effect/ Use, *De Minimis*	**No Effect/ No Use**
Seaboard Railway Station	V	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Seaboard Railway Warehouses	V	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Raleigh Cotton Mills	V	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	No Effect/ No Use	**No Effect/ No Use**
Pine State Creamery	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Seaboard Coast Line Railroad Company Office Building	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Melrose Knitting Mill	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Raleigh Electric Company Power House	V	Adverse Effect/ Use	Adverse Effect/ Use	No Adverse Effect/ No Use	**No Adverse Effect/ No Use**
Carolina Power and Light Company Car Barn and Automobile Garage	V	Adverse Effect/ Use	Adverse Effect/ Use	No Effect/ No Use	**No Effect/ No Use**
St. Paul A.M.E. Church	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Depot Historic District	V	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use	**No Adverse Effect/ No Use**

Table 5-8
Section 4(f) Determinations for Historic Architecture Resources – North Carolina
(Preferred Alternative Identified in Bold)

Resource Name	Section	NC1 Section 106 Effect/ Section 4(f) Use	NC2 Section 106 Effect/ Section 4(f) Use	NC3 Section 106 Effect/ Section 4(f) Use	NC5 Section 106 Effect/ Section 4(f) Use
Depot Historic District Proposed Boundary Amendment	V	No Adverse Effect/ No Use	No Adverse Effect/ No Use	No Adverse Effect/ No Use	**No Adverse Effect/ No Use**
Montfort Hall	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Boylan Heights Historic District	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Joel Lane House	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Boylan Apartments	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Raleigh Hosiery Co. Building	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
North Carolina School Book Depository	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Governor Morehead School Historic District	V	No Effect/ No Use	No Effect/ No Use	No Effect/ No Use	**No Effect/ No Use**
Raleigh and Gaston Railroad Corridor*	M-V	**Adverse Effect/ Use**	Adverse Effect/ Use	**Adverse Effect/ Use**	**Adverse Effect/ Use**

* Impacts to the Raleigh and Gaston Railroad corridor are common among all Project alternatives.

5.7.1 SEABOARD AIR LINE RAILROAD CORRIDOR (VA)

The Preferred Alternative in Sections AA through L is a combination of the various Project alternatives (VA1 in Sections AA, BB, CC, B, C, E, F, H, and I; VA2 in Sections A and J; VA3 in Sections DD and G; and VA4 in Section D). All of the proposed Project alternatives (VA1, VA2, VA3, and VA4) are located within the Seaboard Air Line Railroad corridor for the majority of their lengths. The alternatives will require a use of the resource in order to add a second set of tracks. Although most of the rail corridor will remain unchanged, the removal of the rail bridge over US 1 South near Alberta, VA (in Section F), a contributing element to the historic resource, will alter the resource and diminish the resource's integrity of design, setting, materials, workmanship, feeling, and association. The location will not change, but a notable visual element will be removed from the resource. This element is representative of the modifications that occurred along the track in the second quarter of the twentieth century associated with transportation improvements and the establishment of a multi-state vehicular corridor. Therefore, the Preferred Alternative (and all other alternatives in Virginia) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.2 C. & O. & SEABOARD RAILROAD DEPOT (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives are on common alignment in the vicinity of the C. & O. & Seaboard Railroad Depot and will add a second set of tracks. However, they will not require any modifications to

the existing building or the surrounding tracks and will not alter the property's location, design, setting, materials, workmanship, feeling, or association. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the depot; 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 VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives are on common alignment in the vicinity of the Shockoe Valley & Tobacco Row Historic District and will add a second set of tracks. However, all work will be between one and three stories above the historic district atop existing support and the addition of the second track will not alter the physical composition or viewshed of the district in any way. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this district under Section 106 of the NHPA. The Project will 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 VA1 Project alternative is the Preferred Alternative in Section AA. All three of the proposed Project alternatives are on common alignment in the vicinity of the Shockoe Slip Historic District and will add a second set of tracks. However, all work will be between one and three stories above the historic district atop existing support and the addition of the second track will not alter the physical composition or viewshed of the district in any way. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this district under Section 106 of the NHPA. The Project will 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 VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment in the vicinity of this district. The Project alternatives will add a second set of tracks. However, the modifications will not impact the integrity of any aspects of this district, and the addition of the second track on the existing pier will not alter the district's significance or character. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this district under Section 106 of the NHPA. The Project will 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 VA1 Project alternative is the Preferred Alternative in Section AA, Section BB, and Section CC. The three Project alternatives are on common alignment in the vicinity of the Atlantic Coast Line Railroad corridor. The Project alternatives will require a use of the resource in order to add a second set of tracks. Although most of the rail corridor will remain unchanged, the removal of a utility bridge for the crossing of the Richmond & Petersburg Electric Railway and abandoned abutments associated with the historic alignment of US Highway 10, both of which are contributing elements to the historic resource, will alter the resource and diminish the resource's integrity of design, setting, materials, workmanship, feeling, and association. The location will

not change, but notable visual elements will be removed from the resource. These elements are located along the Atlantic Coast Line Railroad corridor and were constructed during its period of significance in response to the railroad tracks below. Because of the proposed demolition of contributing elements, the Preferred Alternative (and VA2 and VA3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.7 MANCHESTER INDUSTRIAL WAREHOUSE HISTORIC DISTRICT (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment in the vicinity of this district. The Project alternatives will require a use of the resource in order to add a second set of tracks. However, alterations to the rail corridor itself will be minimal and road work in this area will primarily comprise modifications to change the intersection of Maury Street and the CSX rail tracks from an at-grade crossing to a bridged crossing. In addition, the Preferred Alternative will change relocated Maury Street within the Manchester Industrial Historic District to a new road and grade separation over the railway, located just north of the existing I-95 ramps and within the Citgo Petroleum above-ground storage tanks property. In addition to the new roadway, a roundabout will be constructed at the intersection of the relocated Maury Street/I-95 ramps/E. 4th Street, as proposed in the City of Richmond's Long Range Transportation Plan for this area. This new design for Maury Street will avoid property impacts to the expanded Manchester Industrial Historic District.

Although the Project will change the road configuration east of the historic district boundaries, it will not modify the historic road pattern or any above-ground contributing elements within the district itself. No buildings will be altered during this work. The construction of the new roundabout will be at-grade and thus not alter the viewshed of the district's contributing resources. The modifications in this area will not diminish the characteristics that make this property eligible for the NRHP. As such, the Preferred Alternative (and VA2 and VA3) will 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*.

5.7.8 WILLIAMS BRIDGE COMPANY (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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. The Preferred Alternative (and VA2 and VA3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.9 TRANSMONTAIGNE PRODUCT SERVICES, INC. (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will be constructed on the north side of Goodes Street to eliminate any modifications to this historic property and the viewshed will not be modified. The Preferred Alternative (and VA2 and VA3) will 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 VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will not alter any of the characteristics that render this district eligible for the NRHP. The Preferred Alternative (and VA2 and VA3) will 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 VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will not diminish the characteristics that make this property eligible for the NRHP. The Preferred Alternative (and VA2 and VA3) will 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 SHEFFIELDS; AUBURN CHASE; BELLWOOD; BUILDING 42 - DSCR OFFICER'S CLUB; NEW OXFORD (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment near this resource. The Sheffields home and surrounding archaeological site are located over 1,500 feet west of the rail alignment. The viewshed from the main house to the rail tracks is obscured by distance, topography and vegetation, thus rendering the rail area virtually invisible from the historic house. The Preferred Alternative involves reconstructing a second rail within the existing right-of-way, thus the current viewshed will not be modified during the Project. The rail and road work will also not physically impact the intact archaeological remains associate with this property. As such, the Preferred Alternative will have no adverse effect on this property under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to Sheffields; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.13 USDOD SUPPLY CENTER HISTORIC DISTRICT; BELLWOOD-RICHMOND QUARTERMASTER DEPOT HISTORIC DISTRICT (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment near this resource. The massive USDOD historic district is located west of the existing rail line. Only the southeastern 500 feet is adjacent to the current railway corridor boundaries, as the eastern boundary veers away from the rail track along the northeastern 3,000 feet. This southeastern area was once the location of a railroad spur providing rail access to the US Department of Defense complex off of the main rail tracks. Thus, the presence of the rail in this area is associated with the location and association of this resource. At the time the supply center was in operation, rail traffic along this line was higher and trains traveled on dual lines. The Preferred Alternative will add a second rail line in the right-of-way, thus restoring the rail configuration in this area to resemble the system in existence during the resource's Period of Significance. Because the changes will restore the dual tracks in this area, the Preferred Alternative will have no adverse effect on this property under Section 106 of the

NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the USDOD Supply Center Historic District; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.14 RICHMOND & PETERSBURG ELECTRIC RAILWAY (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA, Section BB, and Section CC. The three Project alternatives are on common alignment near this resource. The Project alternatives will require a use of the resource in order to add a second set of tracks. Although most of the rail corridor will remain unchanged, the removal of a utility bridge for the crossing of the Richmond & Petersburg Electric Railway and abandoned abutments associated with the historic alignment of US Highway 10, both of which are contributing elements to the historic resource, will alter the resource and diminish the resource's integrity of design, setting, materials, workmanship, feeling, and association. The location will not change, but notable visual elements will be removed from the resource. These elements are located along the Atlantic Coast Line Railroad corridor and were constructed during its period of significance in response to the railroad tracks below. Because of the proposed demolition of contributing elements, the Preferred Alternative (and VA2 and VA3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.15 HOUSE AT 3619 THURSTON RD (VA)

The VA1 Project alternative is the Preferred Alternative in Section AA. The three Project alternatives are on common alignment near this resource. The Project alternatives will require a use of the resource in order to provide a new roadway about 250 feet west of the dwelling. The house will be separated from the road ROW by a modern home and a vegetative buffer and will not alter the resource's location, design, materials, workmanship, and feeling. The Preferred Alternative (and VA2 and VA3) will 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*.

5.7.16 CENTRALIA POST OFFICE (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment near this resource. The Project alternatives will construct an overpass on Centralia Road. The fill slope from the bridge will be approximately 30 feet tall and located less than 30 feet south of the resource and its driveway will be moved. The Preferred Alternative (and VA2 and VA3) will have an adverse effect on this resource under Section 106 of the NHPA.

Although the Project will have an adverse effect on the Centralia Post Office under Section 106, the Project will 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 VDHR. Based on the visual change anticipated, 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.

5.7.17 RAGLAND HOUSE/4626 CENTRALIA RD (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment near the Ragland House. The Project alternatives will

construct an overpass on Centralia Road and a portion of Centralia Road will be rerouted just east of Ragland House. However, no roadwork will be completed on the Ragland property, and the viewshed from the main house will be only slightly modified as the new road meets the old road southeast of the house. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will 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.

5.7.18 CIRCLE OAKS/4510 CENTRALIA ROAD (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment near this resource. The Project alternatives will construct an overpass on Centralia Road. The approach to the bridge will be visible from Circle Oaks and will require reconfiguring a section of driveway. The modifications have the potential to diminish the characteristics that make the property eligible for the NRHP. The Preferred Alternative (and VA2 and VA3) will have an adverse effect on this resource under Section 106 of the NHPA.

Although the Project will have an adverse effect on Circle Oaks under Section 106, the Project will 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 VDHR. Based on the visual change anticipated, 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.

5.7.19 CENTRALIA EARTHWORKS (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment near this resource. The Project designs include associated road improvements along Hopkins Road and Centralia Road to accommodate traffic rerouted from the closure of nearby at-grade rail crossings. The Centralia Earthworks are located east of Hopkins Road and run north-south parallel to the roadway. The Preferred Alternative will require a small amount of ROW from the resource. Although the earthworks were once larger, previous changes to the road system in this area in the early- and mid-twentieth century have destroyed all physical remnants of the earthworks within and immediately adjacent to the road corridor. The Preferred Alternative will 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*.

5.7.20 CHESTER HISTORIC DISTRICT (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment through the Chester Historic District. The Project alternatives will 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 will result in notable modifications to the district's original plan. The Preferred Alternative (and VA2 and VA3) will have an adverse effect on this district under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.21 PRETLOW HOUSE (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 stone wall. The Preferred Alternative (and VA2 and VA3) will 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*.

5.7.22 EICHELBERGER HOUSE (VA)

The VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will 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. The Preferred Alternative (and VA2 and VA3) will have an adverse effect on this property under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.23 APPOMATTOX RIVER RAILROAD BRIDGE (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. The three Project alternatives are on common alignment near the Appomattox River Railroad Bridge and will all add a new, parallel single track bridge for high speed passenger trains just east of the existing bridge. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this resource under Section 106 of the NHPA.

Based on the visual change anticipated, the FRA has determined that the proximity impacts do not cause a substantial impairment to the Appomattox River Railroad Bridge. 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.

5.7.24 BATTERSEA (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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. The Preferred Alternative (and VA2 and VA3) will 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*.

5.7.25 NORTH BATTERSEA/PRIDE'S FIELD HISTORIC DISTRICT (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. The three Project alternatives are on common alignment near this district. The Project alternatives will 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 will

not impact the physical or historic integrity of the resource. The Preferred Alternative (and VA2 and VA3) will 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*.

5.7.26 DEFENSE ROAD (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will 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 will impact the road's location, design, setting, materials, workmanship, and feeling. The Preferred Alternative (and VA2 and VA3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.27 DIMMOCK LINE/EARTHWORKS (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will necessitate large disturbances to the segment of the earthworks within the Project APE. The Preferred Alternative (and VA2 and VA3) will have an adverse effect on the resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.28 BRIDGE OVER DEFENSE ROAD (VA)

The VA1 Project alternative is the Preferred Alternative in Section CC. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 Preferred Alternative (and VA2 and VA3) will have an adverse effect on the resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.29 FORT DAVIS EARTHWORKS (VA)

The VA3 Project alternative is the Preferred Alternative in Section DD is VA3. The three Project alternatives vary slightly in this area based on their curvature; however, they are all located within the same general vicinity. Although the 4,000-foot long earthworks generally run perpendicular through the Project corridor, the 300-foot long segment where the earthworks intersect the Project area were completely destroyed in 1900 when the Seaboard Air Line Railroad cut through the resource to construct the original rail line in this area. As such, the portion of this historic property within the Project APE does not contribute to the overall eligibility of this resource. Therefore, the Preferred Alternative (and VA2 and VA3) will 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*.

5.7.30 BOWEN HOUSE (VA)

The VA1 Project alternative is the Preferred Alternative in Section C. The three Project alternatives are on common alignment near this resource, which is on the east side of US 1. The

Project alternatives will 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 will 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 will be just southwest of the Bowen House boundaries. It is possible that the new structure will be visible from the main house. However, any modifications to the viewshed will be tempered by a vegetative screen, distance, and the US 1 corridor. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will 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.

5.7.31 BANK OF MCKENNEY (VA)

The VA1 Project alternative is the Preferred Alternative in Section C. The three Project alternatives are on common alignment near this resource. Road modifications are restricted to the area south of the bank building, over 160 feet away. The Preferred Alternative will add a new visual element to the viewshed of this property, namely the rail itself, but the modification will actually restore the historic appearance of this area by putting the rail back where it was originally designed. Therefore, the Preferred Alternative (and VA2 and VA3) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Bank of McKenney; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.32 CHESAPEAKE AND POTOMAC TELEPHONE COMPANY (C & P) BUILDING (VA)

The VA1 Project alternative is the Preferred Alternative in Section C. The C & P Building is located north of a road modification area just outside of the Town of McKenney. The Preferred Alternative will result in the widening of the roadway, but no alterations to the building or its associated landscape will occur. The Project will therefore not diminish any of the characteristics that render this property eligible for the NRHP, although the road footprint along the primary elevation will be slightly modified. Therefore, the Preferred Alternative will have no adverse effect on this historic property. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the C & P Building; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.33 ZEHMER FARM/HONEYMOON HILL FARM (VA)

The VA1 Project alternative is the Preferred Alternative in Section C. The three Project alternatives are on common alignment near this resource. The alternatives will shift the rail corridor slightly west of its existing location in order to straighten a curve. The new corridor will cross the Zehmer Farm along its easternmost boundary. The Project alternatives will also reroute Jack Zehmer Road, which currently crosses the railroad corridor at-grade from the east and provides access southward to the Town of McKenney's wastewater treatment plant (which is located with the listed boundary of the Zehmer Farm). The existing at-grade crossing of the rail corridor will be closed and the rerouted road will tie into Community Street (along the eastern boundary of Sunnyside Elementary School), and then parallel the railroad south (on the west side of the tracks) to connect with the existing access road. The proposed changes are located more

than 600 feet from the main buildings on the farm and will be blocked from view of the house by extensive vegetation. Therefore, the Preferred Alternative (and VA2 and VA3) will 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*.

5.7.34 WYNNHURST (VA)

The VA4 Project alternative is the Preferred Alternative in Section D. The proposed Project alternatives vary near this resource. The Preferred Alternative veers off to the northwest of Wynnhurst and runs through the small community of Rawlings, VA. Wynnhurst is outside of the APE of the Preferred Alternative; the Preferred Alternative will not require a Section 4(f) use of the 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, the VA1/VA3 Project alternative would have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

The VA2 alternative follows a similar alignment to the Preferred Alternative in the vicinity of this resource, veering off to the northwest of Wynnhurst, and running through the small community of Rawlings, VA. 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.

5.7.35 BLICK'S STORE (VA)

The VA4 Project alternative is the Preferred Alternative in Section D. The proposed Project alternatives vary near this resource. All Project alternatives will rebuild the railroad tracks through this area in the existing corridor.

The Preferred Alternative and the VA2 Project alternative will 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 will not impact the physical characteristics of the resource. The Preferred Alternative and the VA2 Project alternative will have no adverse effect on this resource under Section 106 of the NHPA. FRA has determined that the impact from these alternatives is *de minimis*.

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.

5.7.36 HOUSE/458 SECOND AVENUE (VA)

The VA1 Project alternative is the Preferred Alternative in Section E. This alternative is the common alignment of VA1 and VA3. However, all three of the Project alternatives are on common alignment near this resource. Although the general road system in this area will be modified to remove at-grade crossings in the downtown area, the roadways adjacent to this resource will not be changed. Since the general approach to the home will be altered, but the change will not diminish any of the characteristics that render this property eligible for the NRHP, the Preferred Alternative (and VA2) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the House at 458 Second Avenue; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.37 ORGAIN HOUSE (VA)

The VA3 Project alternative is the Preferred Alternative in Section G. The proposed Project alternatives vary near this resource. The Preferred Alternative will add a bridge on Old Indian Road over the relocated rail corridor approximately 500 feet south of the recommended boundary of the Orgain House historic resource. Given the distance of the designs from the main house, the Preferred Alternative will have no adverse effect on this resource under Section 106 of the NHPA. The Preferred Alternative will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Orgain House; therefore, the impacts do not constitute a Section 4(f) use of the resource.

The VA1 and VA2 Project alternatives are located more than 500 feet east of the property. These alternatives would have no effect on this resource under Section 106 of the NHPA and would not require a Section 4(f) use.

The VA4 Project alternative would directly impact the resource, which sits within its construction limits. The VA4 Project alternative would have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.38 TOURIST GUEST HOUSE (VA)

The VA3 Project alternative is the Preferred Alternative in Section G. The proposed Project alternatives vary near this resource. The Preferred Alternative will 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 will be within the viewshed of the home. The Preferred Alternative will have an adverse effect on this property under Section 106 of the NHPA and result in a Section 4(f) use.

The VA1 and VA2 Project alternatives are located over 300 feet southeast of the property. These alternatives would have no effect on this resource under Section 106 of the NHPA and would not require a Section 4(f) use.

The VA4 Project alternative would locate the railroad tracks approximately 350 feet from the eligible boundary of the Tourist Guest House. The new rail line would be visible from a portion of the property, but would not impact the physical characteristics of the resource. Therefore, the VA4 Project alternative would have no adverse effect on the Tourist Guest House. The alternative would not require any ROW from the resource. The FRA has determined that the proximity impacts from the VA4 Project alternative do not cause a substantial impairment to the Tourist Guest House; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.39 OAK SHADES (VA)

The VA3 Project alternative is the Preferred Alternative in Section G. The proposed Project alternatives vary near this resource. The Preferred Alternative is located over 300 feet from the Oak Shades property. This alternative will have no effect on this resource under Section 106 of the NHPA. The Preferred Alternative will not require any ROW from the resource; the alternative will not require a Section 4(f) use.

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, the VA1 Project alternative would have an adverse effect on this resource under Section 106 of the NHPA and result in 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 and smooth a curve in the existing inactive railroad corridor. The rail tracks would be located down a steel escarpment and not visible from the main house. However, the rail alignment would be shifted away from the historic location of the railroad and would cut into the hill slope by about 30 feet. The VA2 Project alternative would have an adverse effect on this property under Section 106 of the NHPA and result in a Section 4(f) use. (It should be noted that the Richmond to Raleigh Project Tier II DEIS identified VA2 as having a *de minimis* impact on Oak Shades. This determination was revised based on additional coordination with VDHR and review of the designs within Section G.)

The VA4 Project alternative is located over 800 feet from the Oak Shades property. This alternative would have no effect on this resource under Section 106 of the NHPA and would not require a Section 4(f) use.

5.7.40 EVANS HOUSE (VA)

The VA1 Project alternative is the Preferred Alternative in Section E. This alternative is the common alignment of VA1 and VA3. However, all three of the Project alternatives are on common alignment near this resource. The Preferred Alternative will add a set of tracks just east of the existing rail corridor that is located adjacent to the southeastern boundary of the Evans House. In addition, the road system in this area will also be modified by rerouting Wilson Road north of the Evans House to provide an overpass of the rail corridor. This new bridge will be northwest of the Evans House boundaries. It is possible that the new structure will be visible from the house. However, any modifications to the viewshed will be tempered by a vegetative screen and distance, and no character-defining features of this resource will be diminished by this change. Therefore, the Preferred Alternative (and VA2) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Evans House; therefore, the impacts do not constitute a Section 4(f) use.

5.7.41 LA CROSSE COMMERCIAL HISTORIC DISTRICT (VA)

The VA1 Project alternative is the Preferred Alternative in Section I. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will require the demolition of at least two contributing resources. The Preferred Alternative will have an adverse effect on this district under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.42 LA CROSSE HOTEL (VA)

The VA1 Project alternative is the Preferred Alternative in Section I. This alternative is the common alignment of VA1 and VA3. However, all three of the Project alternatives are on common alignment near this resource. The La Crosse Hotel is located immediately adjacent to the existing railroad ROW. The designs shown in the Richmond to Raleigh Project Tier II DEIS required a small amount of ROW from the hotel property (but not impacting the hotel itself) in order to accommodate the Town of La Crosse's plans to use the property as a future high speed rail station. Subsequent to publication of the Richmond to Raleigh Project Tier II DEIS, the designs for the Preferred Alternative were revised to no longer require any ROW from the resource. Moreover, although the Preferred Alternative will install a new set of rails within the viewshed of the primary elevation of this historic property, similar rails were in place when the hotel was constructed. The rail system was, in fact, the impetus for the development of this lot. Thus, the changes will not diminish the resource's integrity of location, design, setting, materials,

workmanship, feeling or association. Based on these changes, the Preferred Alternative (and VA2) will have no adverse effect on this property under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Evans House; therefore, the impacts do not constitute a Section 4(f) use.

5.7.43 WRIGHT FARMSTEAD (VA)

The VA2 Project alternative is the Preferred Alternative in Section J. The proposed Project alternatives vary near this resource. The Preferred Alternative is located more than 500 feet from the Wright Farmstead. The Preferred Alternative will have no effect on this resource under Section 106 of the NHPA and will not require a Section 4(f) use.

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. The VA1/VA3 Project alternative would have an adverse effect on this property under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.44 SARDIS METHODIST CHURCH (VA)

The VA2 Project alternative is the Preferred Alternative in Section J. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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. The Preferred Alternative (and VA1 and VA3) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will 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.

5.7.45 BRACEY HISTORIC DISTRICT (VA)

The VA1 Project alternative is the Preferred Alternative in Section K. This alternative is the common alignment of VA1 and VA3. The proposed Project alternatives vary near this resource. The Preferred Alternative will construct the rail corridor west of the original Seaboard Air Line tracks. The alternative will have no effect on this district under Section 106 of the NHPA and will 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. The VA2 Project alternative would have an adverse effect on this district under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.46 BRACEY DEPOT (VA)

The VA1 Project alternative is the Preferred Alternative in Section K. This alternative is the common alignment of VA1 and VA3. The proposed Project alternatives vary near this resource. The Bracey Depot is located adjacent to the rail tracks, but this building has been moved further away from the rail footprint and reoriented. Changes to the rail corridor in this area from the Preferred Alternative will result in an altered viewshed from the current orientation of the depot, but the alternative will not diminish any of the characteristics that render this resource eligible for

the NHRP. Therefore, the Preferred Alternative will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Bracey Depot; therefore, the impacts do not constitute a Section 4(f) use of the resource.

The VA2 Project alternative would reestablish rail on the abandoned Seaboard tracks. However, the existing rail corridor in this area is too narrow to accommodate the proposed line, thus the corridor would be widened to the east. This would result in construction directly adjacent to the Bracey Depot. As a result of these changes, the VA2 Project alternative would have an adverse effect on this district under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.47 BRACEY & COMPANY STORE (VA)

The VA1 Project alternative is the Preferred Alternative in Section K. This alternative is the common alignment of VA1 and VA3. The proposed Project alternatives vary near this resource. The Bracey Store is located east of the rail corridor. The viewshed between the store and the rail tracks is partially blocked by the presence of the Bracey Store, although the rail crossing of Bracey Road is visible from the primary elevation of this resource. The Preferred Alternative would reintroduce rail tracks in this area, which will alter this resource's integrity of setting. However, it will not diminish the integrity of location, design, materials, workmanship, feeling or association. Therefore, the Preferred Alternative will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Bracey Depot; therefore, the impacts do not constitute a Section 4(f) use of the resource.

The VA2 Project alternative would reestablish rail on the abandoned Seaboard tracks. However, the existing rail corridor in this area is too narrow to accommodate the proposed line, thus the corridor would be widened to the east. Changes to the rail corridor in this area would result in an altered viewshed from the current orientation of the store, but the alternative would not diminish any of the characteristics that render this resource eligible for the NHRP. Therefore, 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 this alternative is *de minimis*.

5.7.48 GRANITE HALL/FITTS HOUSE (VA)

The VA1 Project alternative is the Preferred Alternative in Section L in Virginia. The proposed Project alternatives vary near this resource. The Preferred Alternative and the VA3 Project alternative share a 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. The Preferred Alternative (and VA3) will have no effect on the resource under Section 106 of the NHPA and will 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, the VA2 Project alternative would have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.49 CHAPEL OF THE GOOD SHEPHERD (NC)

The NC1 Project alternative is the Preferred Alternative in Section M. This alternative is the common alignment of NC1 and NC3, and all three Project alternatives are on common alignment

near this resource. The designs presented in the Richmond to Raleigh Project Tier II DEIS would have rerouted Ridgeway Warrenton Road from its current location in front of the church to a new location immediately behind the church in order to access a proposed grade separation over the railroad corridor. Due to the changes in access and the visual environment, all three Project alternatives were determined to have an adverse effect on the Chapel of the Good Shepherd under Section 106 of the NHPA.

In response to comments on the Richmond to Raleigh Project Tier II DEIS and in coordination with Warren County, the Kerr-Tar Council of Governments (Rural Planning Organization), and the NCDOT Transportation Planning Branch, several modifications were made to the proposed roadwork for the Ridgeway area. The revised designs will put the grade separation over the railroad corridor on Ridgeway Drewry Road rather than on Ridgeway Warrenton Road. Ridgeway Drewry Road will be shifted approximately 650 feet to the northeast to cross over US 1 and the railroad on a bridge, and connect to a new alignment for Axtell Ridgway Road on the south side of the railroad. Additional traffic will pass in front of Chapel of the Good Shepherd to use the new grade separation. Based on the revised designs, the Preferred Alternative (and NC2 and NC3) will 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 Chapel of the Good Shepherd; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.50 DR. THOMAS B. WILLIAMS HOUSE AND OFFICE (NC)

The NC1 Project alternative is the Preferred Alternative in Section M. This alternative is the common alignment of NC1 and NC3, and all three Project alternatives are on common alignment near this resource. As discussed above for the Chapel of the Good Shepherd, changes to the designs presented in the Richmond to Raleigh Project Tier II DEIS will put the bridge over the railroad corridor in Ridgeway, NC, on Ridgeway Drewry Road rather than on Ridgeway Warrenton Road. Ridgeway Drewry Road will be shifted approximately 650 feet to the northeast to cross over US 1 and the railroad on a bridge, and connect to a new alignment for Axtell Ridgway Road on the south side of the railroad. The bridge will be located approximately 500 feet to the west of the Dr. Thomas B. Williams House and Office. The Preferred Alternative (and NC2 and NC3) will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Dr. Thomas B. Williams House and Office; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.51 MARSHALL HOUSE/TAVERN (NC)

The NC1 Project alternative is the Preferred Alternative in Section M. This alternative is the common alignment of NC1 and NC3, and all three Project alternatives are on common alignment near this resource. As discussed above for the Chapel of the Good Shepherd, changes to the designs presented in the Richmond to Raleigh Project Tier II DEIS will put the bridge over the railroad corridor in Ridgeway, NC, on Ridgeway Drewry Road rather than on Ridgeway Warrenton Road. Ridgeway Drewry Road will be shifted approximately 650 feet to the northeast to cross over US 1 and the railroad on a bridge, and connect to a new alignment for Axtell Ridgway Road on the south side of the railroad. The bridge will be located approximately 700 feet to the east of the Marshall House/Tavern, and a short section of the old Ridgeway Drewry Road in front of the Marshall House/Tavern will be used to provide a connection between US 1 and the new road and bridge. The designs will require a minor amount of road frontage ROW from the resource for the new connection. The Preferred Alternative (and NC2 and NC3) will

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*.

5.7.52 WILLIAM J. HAWKINS HOUSE (NC)

The NC1 Project alternative is the Preferred Alternative in Section N. This alternative is the common alignment of NC1 and NC3, and all three Project alternatives are on common alignment near this resource. The Project alternatives will require a use of the resource in order to add a second set of tracks. In addition, the current driveway access for the property will be relocated. The Preferred Alternative (and NC2 and NC3) will have no adverse effect on this resource under Section 106 of the NHPA. NC-HPO's concurrence with this determination is conditional; the Richmond to Raleigh Project must coordinate with the property owner about the access issue (i.e., a temporary construction easement will be required to maintain access). FRA has determined that the impacts from all three Project alternatives are *de minimis*.

5.7.53 HOLLOWAY FARM (NC)

The NC3 Project alternative is the Preferred Alternative in Section O. The proposed Project alternatives vary near this resource. The Preferred Alternative is located more than 500 feet east of the resource. This alternative will have no effect on this resource under Section 106 of the NHPA and will not require a Section 4(f) use.

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 result in a Section 4(f) use.

5.7.54 FORREST ELLINGTON FARM (NC)

The NC3 Project alternative is the Preferred Alternative in Section O. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will be required at the intersection of Brookston Road and Carver School Road. The Preferred Alternative (and NC1 and NC2) will 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*.

5.7.55 HENDERSON HISTORIC DISTRICT AND PROPOSED BOUNDARY EXPANSION (NC)

The NC1 Project alternative is the Preferred Alternative in Section P. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will require a small amount of ROW be taken from a house along Andrews Avenue and necessitate re-grading a driveway. It will also impact landscaping along Andrews Avenue, potentially removing several trees. The Preferred Alternative (and NC2 and NC3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.56 SOUTH HENDERSON INDUSTRIAL HISTORIC DISTRICT (NC)

The NC1 Project alternative is the Preferred Alternative in Section P. The three Project alternatives are on common alignment near this resource. The Project alternatives will require a

use of the resource in order to bridge Alexander Avenue on new alignment through the South Henderson Industrial Historic District. These changes will require a small amount of ROW from contributing resources. The Preferred Alternative (and NC2 and NC3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.57 HOUSES (5 WORKER HOUSES ON 1400 BLOCK OF NICHOLAS ST) (NC)

The NC1 Project alternative is the Preferred Alternative in Section P. The three Project alternatives are on common alignment near this resource. The Project alternatives will require a use of the resource in order to add a second set of tracks. The alternatives will require minor ROW from the resources directly adjacent to the railroad corridor (i.e., from their backyards). The Preferred Alternative (and NC2 and NC3) will 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*.

5.7.58 HOUSES (3 SIDE GABLE HOUSES ON 1500 BLOCK OF NICHOLAS ST) (NC)

The NC1 Project alternative is the Preferred Alternative in Section P. The three Project alternatives are on common alignment near this resource. The Project alternatives will require a use of the resource in order to add a second set of tracks. The alternatives will require minor ROW from the resources directly adjacent to the railroad corridor (i.e., from their backyards). The Preferred Alternative (and NC2 and NC3) will have no adverse effect on these resources under Section 106 of the NHPA, provided that there is no taking of the structures (which is not anticipated). FRA has determined that the impacts from all three Project alternatives are *de minimis*.

5.7.59 FRANKLINTON HISTORIC DISTRICT (INCLUDES STERLING MILL HISTORIC DISTRICT) (NC)

The NC1 Project alternative is the Preferred Alternative in Section S. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 Preferred Alternative (and NC2 and NC3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.60 STERLING COTTON MILL (NC)

The NC1 Project alternative is the Preferred Alternative in Section S. The three Project alternatives are on common alignment near this resource. The Project alternatives will 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 will be needed for these improvements. The Preferred Alternative (and NC2 and NC3) will 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*.

5.7.61 CEDAR CREEK RAILROAD BRIDGE PIERS (NC)

The NC1 Project alternative is the Preferred Alternative in Section S. The proposed Project alternatives vary in the vicinity of this resource. The Preferred Alternative alignment and the NC3 alignment will cross Cedar Creek on a new bridge just to the east of the piers; the NC 2 alignment will 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 will no longer be used for rail

traffic. The Preferred Alternative (and NC2 and NC3) will have no adverse effect on this resource under Section 106 of the NHPA. The NC-HPO'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 will 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.

5.7.62 YOUNGSVILLE HISTORIC DISTRICT (NC)

The NC1 Project alternative is the Preferred Alternative in Section T. The three 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 will 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 will have no adverse effect on this resource under Section 106 of the NHPA.

The Project will 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.

5.7.63 GLEN ROYALL MILL VILLAGE HISTORIC DISTRICT (NC)

The NC1 Project alternative is the Preferred Alternative in Section U. The three 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 Preferred Alternative (and NC2 and NC3) will have no adverse effect on this resource under Section 106 of the NHPA. This determination is conditional; the Richmond to Raleigh Project must design the pedestrian crossing in a manner that minimizes its opaqueness and fits in with the character of its surroundings (based on coordination with NC-HPO).

The Project will 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.

5.7.64 WAKE FOREST HISTORIC DISTRICT (NC)

The NC1 Project alternative is the Preferred Alternative in Section U. The three Project alternatives are on common alignment through Wake Forest and will provide a pedestrian-only grade separation of Elm Avenue within the Wake Forest Historic District. The designs also provide a new access road to allow four residences, which are contributing elements to the district, to access their properties. The Preferred Alternative (and NC2 and NC3) will have no adverse effect on this resource under Section 106 of the NHPA. This determination is conditional; the Section 106 Memorandum of Agreement (MOA) for the Project must specifically address coordination with owners of the four residences for temporary construction easements. FRA has determined that the impacts from all three Project alternatives are *de minimis*.

5.7.65 CRABTREE CREEK RAILROAD BRIDGE PIER (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The four Project alternatives are on common alignment near this resource. The Project alternatives will require a use of the resource in order to provide a new rail bridge that will accommodate an additional

track. The new bridge will 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 will not be otherwise impacted. The Preferred Alternative (and NC1, NC2, and NC3) alternatives will have no adverse effect on this resource under Section 106 of the NHPA. This determination is conditional; the Richmond to Raleigh Project 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*.

5.7.66 GULF PETROLEUM PRODUCTS WAREHOUSE (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary to a slight degree in the vicinity of this resource. However, all four of the Project alternatives will add an additional railroad track within the existing active rail corridor adjacent to the resource. The four Project alternatives all require ROW from the side of the warehouse closest to the existing CSX railroad corridor. The designs potentially require the warehouse building to be demolished and also impact the masonry foundation at the northeast corner of the parcel, which historically held a series of above-ground tanks and is a contributing element to the resource. The Preferred Alternative (and NC1, NC2, and NC3) will have an adverse effect on this resource under Section 106 of the NHPA and result in a Section 4(f) use.

5.7.67 ROANOKE PARK HISTORIC DISTRICT (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary in the vicinity of this resource. The Preferred Alternative and the NC1 and NC2 rail alignments are located across Capital Boulevard from the district. The Preferred Alternative (and NC1 and NC2) will have no effect on this resource under Section 106 of the NHPA and do 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 result in a Section 4(f) use.

5.7.68 NOLAND PLUMBING COMPANY BUILDING (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary in the vicinity of this resource. The Preferred Alternative and the NC1 and NC2 rail alignments are located across Capital Boulevard from the resource. The Preferred Alternative (and NC1 and NC2) will have no effect on this resource under Section 106 of the NHPA and do 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*.

5.7.69 GLENWOOD-BROOKLYN HISTORIC DISTRICT (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary in the vicinity of this resource. The Preferred Alternative is located on the east side of the Norfolk Southern railroad tracks adjacent to the Glenwood-Brooklyn Historic District. The Preferred Alternative will have no effect on this resource under Section 106 of the NHPA and will not require a Section 4(f) use.

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*.

5.7.70 SEABOARD RAILWAY STATION (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary near this resource. The Preferred Alternative and the NC3 rail alignments are located across Capital Boulevard from the resource. The Preferred Alternative (and NC3) will have no effect on this resource under Section 106 of the NHPA and would not require a Section 4(f) use.

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.

5.7.71 SEABOARD RAILWAY WAREHOUSES (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary near this resource. The Preferred Alternative and the NC3 rail alignments are located across Capital Boulevard from the resource. The Preferred Alternative (and NC3) will have no effect on this resource under Section 106 of the NHPA and would not require a Section 4(f) use.

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.

5.7.72 RALEIGH COTTON MILLS (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary near this resource. The Preferred Alternative and the NC3 rail alignments are

located across Capital Boulevard from the resource. The Preferred Alternative (and NC3) will have no effect on this resource under Section 106 of the NHPA and would not require a Section 4(f) use.

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*.

5.7.73 RALEIGH ELECTRIC COMPANY POWER HOUSE (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary near this resource. The Preferred Alternative and the NC3 rail alignments will close the existing at-grade railroad crossing at West Jones Street and provide a pedestrian crossing across the tracks. No ROW will be required from the resource. The Preferred Alternative and the NC3 Project alternative will have no adverse effect on this resource under Section 106 of the NHPA. The Project will not require any ROW from the resource. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Raleigh Electric Company Power House; therefore, the impacts do not constitute a Section 4(f) use of the 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 result in 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 result in a Section 4(f) use.

5.7.74 CAROLINA POWER AND LIGHT COMPANY CAR BARN AND AUTOMOBILE GARAGE (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The proposed Project alternatives vary near this resource. The Preferred Alternative and the NC3 rail alignments will close the existing at-grade railroad crossing at West Jones Street. No ROW will be required from the resource. The Preferred Alternative and the NC3 Project alternative will have no effect on this resource under Section 106 of the NHPA and will not require a Section 4(f) use.

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 result in 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 result in a Section 4(f) use.

5.7.75 DEPOT HISTORIC DISTRICT & PROPOSED BOUNDARY AMENDMENT (NC)

The NC5 Project alternative is the Preferred Alternative in Section V. The Project alternatives vary slightly in the vicinity of the Depot Historic District Proposed Boundary Amendment. All four of the Project alternatives would add an additional railroad track within the existing active rail corridor adjacent to the district. The Preferred Alternative and the NC1, NC2, and NC3 Project alternatives will not require ROW from resource. However, they all close the existing at-grade railroad crossing on W. Hargett Street within the proposed expansion area for the district. Therefore, the Preferred Alternative (and NC1, NC2, and NC3) will have no adverse effect on this resource under Section 106 of the NHPA. The FRA has determined that the proximity impacts do not cause a substantial impairment to the Depot Historic District & Proposed Boundary Amendment; therefore, the impacts do not constitute a Section 4(f) use of the resource.

5.7.76 RALEIGH AND GASTON RAILROAD CORRIDOR (NC)

The Preferred Alternative in Sections M through V is a combination of the various Project alternatives (NC1 in Sections M, N, P, Q, R, S, T, and U; NC3 in Section O; and NC 5 in Section V). All of the proposed Project alternatives (NC1, NC2, NC3, and NC5) are located within the Raleigh and Gaston Railroad corridor for the majority of their lengths. The alternatives will require a use of the resource in order to add a second set of tracks. Although the alternatives will not impact the vast majority of contributing elements to the corridor, they all replace at least one of the historic concrete bridges and potentially impact at least one of the historic stone-lined culverts. Therefore, the Preferred Alternative (and all other alternatives in North Carolina) will have an adverse effect on the Raleigh and Gaston Railroad corridor under Section 106 of the NHPA and result in 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 Project are described in Table 5-9 and the sections below. All battlefields are impacted similarly by the Project. The battlefields in Table 5-9 are ordered from north to south as they appear in the Richmond to Raleigh Project Study Area.

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 Project in these areas would result in a change to the Section 4(f) uses described below.

Table 5-9
Section 4(f) Determinations for Battlefields – Virginia
(Preferred Alternative Identified in Bold)

Resource Name	Section	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use	VA4 Section 106 Effect/ Section 4(f) Use
Proctor's Creek (resource spans sections)	AA	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A

Table 5-9
Section 4(f) Determinations for Battlefields – Virginia
(Preferred Alternative Identified in Bold)

Resource Name	Section	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use	VA4 Section 106 Effect/ Section 4(f) Use
	BB	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Port Walthall Junction	BB	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Swift Creek/Arrowfield Church	CC	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
Petersburg III/The Breakthrough (resource spans sections)	CC	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
	DD	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	N/A
Weldon Railroad/Globe Tavern (resource spans sections)	CC	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
	DD	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	N/A
Peebles Farm (resource spans sections)	CC	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	N/A
	DD	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	N/A
Boydton Plank Road (resource spans sections)	DD	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	N/A
	A	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	N/A
Hatcher's Run (resource spans sections)	DD	No Adverse Effect/ Use, *De Minimis*	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	N/A
	A	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	N/A

Table 5-9
Section 4(f) Determinations for Battlefields – Virginia
(Preferred Alternative Identified in Bold)

Resource Name	Section	VA1 Section 106 Effect/ Section 4(f) Use	VA2 Section 106 Effect/ Section 4(f) Use	VA3 Section 106 Effect/ Section 4(f) Use	VA4 Section 106 Effect/ Section 4(f) Use
Lewis Farm	A	No Adverse Effect/ Use, *De Minimis*	**No Adverse Effect/ Use, *De Minimis***	No Adverse Effect/ Use, *De Minimis*	N/A
Dinwiddie Courthouse	B	**No Adverse Effect/ No Use**	No Adverse Effect/ No Use	No Adverse Effect/ No Use	N/A

5.8.1 PROCTOR'S CREEK

The VA1 Project alternative is the Preferred Alternative in Section AA and Section BB. The three Project alternatives are on common alignment through this battlefield. The alternatives will require a use of the resource in order to add a second set of tracks. The Preferred Alternative (and VA2 and VA3) will 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 VA1 Project alternative is the Preferred Alternative in Section BB. The three Project alternatives are on common alignment through this battlefield. The alternatives will 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. The Preferred Alternative (and VA2 and VA3) will 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 VA1 Project alternative is the Preferred Alternative in Section CC. The three Project alternatives are on common alignment through this battlefield. The alternatives will 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. The Preferred Alternative (and VA2 and VA3) will 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 VA1 Project alternative is the Preferred Alternative in Section CC and the VA3 Project alternative is the Preferred Alternative in Section DD. The three Project alternatives are on common alignment through this battlefield. The alternatives will 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 will be widened to accommodate the second set of tracks, the bridge over Defense Road will be widened (see discussion of Defense Road above), and a short segment of Halifax Road east of the rail tracks will 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. The Preferred Alternative (and VA2 and VA3 in Section CC, as well as VA1 and VA2 in Section DD) will 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 VA1 Project alternative is the Preferred Alternative in Section CC and the VA3 Project alternative is the Preferred Alternative in Section DD. The proposed Project alternatives vary slightly through this battlefield. All of the Project alternatives will 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 2.2.6 for more details). The Preferred Alternative (and VA2 and VA3 in Section CC, as well as VA1 and VA2 in Section DD) will 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 VA1 Project alternative is the Preferred Alternative in Section CC and the VA3 Project alternative is the Preferred Alternative in Section DD. The three Project alternatives are on common alignment through this battlefield. The alternatives will 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. The Preferred Alternative (and VA2 and VA3 in Section CC, as well as VA1 and VA2 in Section DD) will 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 VA3 Project alternative is the Preferred Alternative in Section DD and the VA2 Project alternative is the Preferred Alternative in Section A. The proposed 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) in Section A. The VA1/VA3 Project alternative stays within the existing railroad ROW in this area. The Preferred Alternative (VA2) extends slightly outside of the existing ROW from Duncan Road to Dabney Mill Road, a distance of approximately two miles, in order to flatten out a severe curve in the existing rail corridor alignment. All of the Project alternatives will require a use of the resource in order to add a second set of tracks and modify a segment of Squirrel Level Road (in Section DD). The Preferred Alternative (and VA1 and VA2 in Section DD, as well as VA1 and VA3 in Section A) will 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 VA3 Project alternative is the Preferred Alternative in Section DD and the VA2 Project alternative is the Preferred Alternative in Section A. The proposed 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 will 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

will be widened and a small section of Squirrel Level Road will be improved. Both road improvement areas are located in the very northeastern corner of the larger battlefield. The Preferred Alternative (and VA1 and VA2 in Section DD, as well as VA1 and VA3 in Section A) will 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 VA2 Project alternative is the Preferred Alternative in Section A. The three Project alternatives are on common alignment through this battlefield. All of the Project alternatives will require a use of the resource in order to add a second set of tracks and to reroute a segment of Quaker Road. The Preferred Alternative (and VA1 and VA3) will 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 VA1 Project alternative is the Preferred Alternative in Section B. The three Project alternatives are on common alignment through this battlefield. All of the Project alternatives will add a second set of tracks in this area. The Preferred Alternative (and VA2 and VA3) will have no adverse effect on this battlefield under Section 106 of the NHPA. The Project alternatives will 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

As described in Section 5.5, Section 4(f) applies to archeological sites that are on or eligible for the NRHP and that warrant preservation in place. Based on these criteria, Section 4(f) applies to nine archeological resources in the Project Study Area. All of these resources are associated with historic architecture resources whose impacts are described in Section 5.7. The impacts are also summarized in Table 5-10 below.

Table 5-10 Section 4(f) Determinations for Archaeological Resources		
Resource Name	**Section**	**Preferred Alternative Section 106 Effect/ Section 4(f) Use**
Williams Bridge Company*	AA	Adverse Effect/Use
USDOD Supply Center District*	AA	No Adverse Effect/No Use
Centralia Earthworks*	BB	No Adverse Effect/*De Minimis* Use
Battersea*	CC	No Adverse Effect/*De Minimis* Use
Dimmock Line/Earthworks*	CC	Adverse Effect/Use
Fort Davis Earthworks*	DD	No Adverse Effect/*De Minimis* Use
Orgain House*	G	No Adverse Effect/No Use
La Crosse Hotel*	I	No Adverse Effect/*De Minimis* Use
Wright Farmstead*	J	No Effect/No Use

* Archaeology site is associated with a historic architecture resource.

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 (not *de minimis*) by one or more of the proposed Project alternatives (listed in Table 5-11), avoidance alternatives were investigated as described below. The Preferred Alternative is highlighted in **bold**.

Table 5-11 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**	**VA4/NC5 Section 4(f) Use**
Seaboard Air Line Railroad Corridor	AA – L / VA	**Use**	**Use**	**Use**	**Use**
Atlantic Coast Line Railroad Corridor	AA, BB, CC / VA	**Use**	Use	Use	N/A
Williams Bridge Company	AA / VA	**Use**	Use	Use	N/A
Richmond & Petersburg Electric Railway	AA, BB, CC / VA	**Use**	Use	Use	N/A
Chester Historic District	BB / VA	**Use**	Use	Use	N/A
Eichelberger House	BB / VA	**Use**	Use	Use	N/A
Defense Road	CC / VA	**Use**	Use	Use	N/A
Dimmock Line/Earthworks	CC / VA	**Use**	Use	Use	N/A
Bridge over Defense Road	CC / VA	**Use**	Use	Use	N/A
Wynnhurst	D / VA	Use	No Use	Use	**No Use**
Orgain House	G / VA	No Use	No Use	**No Use**	Use
Tourist Guest House	G / VA	No Use	No Use	**Use**	No Use
Oak Shades	G / VA	Use	Use	**No Use**	No Use

Table 5-11
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	VA4/NC5 Section 4(f) Use
La Crosse Commercial Historic District	I / VA	**Use**	Use	Use	N/A
Wright Farmstead	J / VA	Use	**No Use**	Use	N/A
Bracey Historic District	K / VA	**No Use**	Use	No Use	N/A
Bracey Depot	K / VA	**No Use**	Use	No Use	N/A
Granite Hall/Fitts House	L / VA	**No Use**	Use	No Use	N/A
Holloway Farm	O / NC	Use	Use	**No Use**	N/A
Henderson Historic District and Proposed Boundary Expansion	P / NC	**Use**	Use	Use	N/A
South Henderson Industrial Historic District	P / NC	**Use**	Use	Use	N/A
Franklinton Historic District (Includes Sterling Mill Historic District)	S / NC	**Use**	Use	Use	N/A
Gulf Petroleum Products Warehouse	V / NC	Use	Use	Use	**Use**
Roanoke Park Historic District	V / NC	No Use	No Use	Use	**No Use**
Raleigh Electric Company Power House	V / NC	Use	Use	No Use	**No Use**
Carolina Power and Light Company Car Barn and Automobile Garage	V / NC	Use	Use	No Use	**No Use**
Raleigh and Gaston Railroad Corridor	M – V / NC	**Use**	**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 in the discussion below 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 use of 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 Project development process.

A fundamental goal of the "incremental" high speed rail approach established in the Tier I ROD 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. To avoid impacts to all Section 4(f) resources would necessitate relocating the rail corridor along lengthy sections of

the Project. The ability of the Richmond to Raleigh Project 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 along the Project corridor. These cities and towns grew up historically along the 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 implementation of the Project 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 could 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.

Avoidance alternatives for individual Section 4(f) resources were designed in less developed areas where it was possible to shift the rail alignment onto new ROW while continuing to meet the overall purpose and need of the Project. These avoidance alternatives were successful at avoiding Section 4(f) uses of 11 of the 27 resources that would be impacted by one or more of the Project alternatives.

The unavoidable Section 4(f) impacts addressed in this document are located either along existing rail ROW (primarily within the developed areas of cities and towns) or within the rail corridor itself (such as the historic Raleigh and Gaston Railroad corridor). 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 for bypasses, which increases 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 alternatives 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 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 Project must be evaluated within the section of the Project where the resource is located. As explained in Section 2 of this FEIS, 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 has been 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 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, South Henderson Industrial, and Franklinton historic districts were assessed during the Project planning process. In each of these historic districts, all Project alternatives are on common alignment due to the significant constraints, and the Preferred Alternative is this common alignment (referred to as VA1 in Virginia and NC1 in North Carolina). The following discussion

describes the concepts that were objectively evaluated to avoid the use of the Section 4(f) resources 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/Section 4(f) use 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 was 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 would neither address nor correct the transportation purpose and need for the proposed Project.

The overarching philosophy of the design of the Richmond to Raleigh Project 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.

Section 1.4.1.7 of this FEIS 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 train 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 Project, which is to increase the safety and operability of the transportation system within the travel corridor. Therefore, FRA has determined that retaining at-grade crossings 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 5-12. Based on the unacceptable operational problems this concept would cause, FRA has determined that relocating grade separations to outside of historic districts is not prudent per 23 CFR 774.17.

Table 5-12 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.
	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.

Table 5-12
Grade Separation Locations Considered

Historic District	Location	Reasons Selected or Excluded
	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 Project would replace and widen the existing bridge); therefore, it would have the fewest residential and commercial relocations and maintain continuity in traffic operations.
	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 Project, which is to divert trips from air and highway within the travel corridor. Therefore, FRA has determined that this concept is not prudent per 23 CFR 774.17.

5.10.4 SEABOARD AIR LINE RAILROAD CORRIDOR (VA)

The Richmond to Raleigh Project rail alternatives are on common alignment and located within the existing rail corridor when they are in the vicinity of the Seaboard Air Line Railroad corridor, which spans the entire Project corridor in Virginia (Sections AA through L). Although the majority of this resource will remain unchanged with the implementation of the Richmond to Raleigh Project, the Project will impact one contributing element to the resource. The Project will remove the rail bridge over US 1 South near Alberta in Section F (where all alternatives are common).

The Section 4(f) use of the rail bridge over US 1 South is due to the relocation of US 1 South to a location adjacent to US 1 North in this area, as well as a slight realignment of the existing rail corridor. The existing rail bridge does not meet current design standards for vertical or horizontal clearance of US 1 South and there is anecdotal evidence of drainage issues on US 1 South under the bridge. Therefore, the designs propose to remove (i.e., fill in) the bridge and provide a new bridge for US 1 South approximately 500 feet to the south of the current location. To avoid this Section 4(f) use of the bridge would require keeping both the rail corridor and US 1 South in their current location and the bridge in its current condition. Any relocation of the rail corridor or US 1 South necessitates the bridge being removed for safety reasons (i.e., the lack of sufficient vertical and horizontal clearance). One of the purposes of the Project is to increase the safety and operability of the transportation system within the travel corridor and maintaining the rail bridge in place would result in unacceptable safety problems. Therefore, FRA has determined that an avoidance alternative for the Seaboard Air Line Railroad corridor is not prudent per 23 CFR 774.17.

5.10.5 ATLANTIC COAST LINE RAILROAD CORRIDOR AND RICHMOND & PETERSBURG ELECTRIC RAILWAY (VA)

The Richmond to Raleigh Project rail alternatives are on common alignment and are located within the existing, active rail corridor in the vicinity of the Atlantic Coast Line Railroad corridor and Richmond & Petersburg Electric Railway historic resources, which span Sections AA, BB, and CC. Although the majority of these resources will remain unchanged with the implementation of the Richmond to Raleigh Project, the Project will impact contributing elements to the historic resources. Within the Atlantic Coast Line Railroad corridor, the Project will remove a utility bridge for the crossing of the Richmond & Petersburg Electric Railway and abandoned abutments associated with the historic alignment of US Highway 10 (W. Hundred Road). Within the corridor of the Richmond & Petersburg Electric Railway, the Project will remove a utility bridge that historically carried the electric railway over the rail corridor immediately south of Hundred Road in Chester. (Note that the utility bridge impact is common to both the Atlantic Coast Line Railroad corridor and Richmond & Petersburg Electric Railway resources.)

An avoidance alternative for impacts to the utility bridge and abandoned abutments would require relocating the rail alignments out of the existing rail corridor in the vicinity of the Town of Chester. To avoid these Section 4(f) uses of the resources would result in replacing the existing grade separated crossing of US Highway 10 and relocating the alternatives on developed land in this predominantly urban area. 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 and new grade separation of US Highway 10 would result in significantly greater Project costs. Cumulatively, these impacts are not prudent per 23 CFR 774.17.

5.10.6 WILLIAMS BRIDGE COMPANY (VA)

The Richmond to Raleigh Project rail alternatives are on common alignment and 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 Richmond to Raleigh Project designs at the request of the company. This driveway will 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, FRA has determined that an avoidance alternative for the Williams Bridge Company is not prudent per 23 CFR 774.17.

5.10.7 EICHELBERGER HOUSE (VA)

The 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 Richmond to Raleigh Project 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, FRA has determined that an avoidance alternative for the Eichelberger House is not prudent per 23 CFR 774.17.

5.10.8 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 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 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, FRA has determined that an avoidance alternative for Defense Road, Dimmock Line/Earthworks, and the Bridge over Defense Road is not prudent per 23 CFR 774.17.

5.10.9 WYNNHURST (VA)

Although the Preferred Alternative in Section D (VA4) veers to the northwest of Wynnhurst through the small community of Rawlings, VA, and does not require a Section 4(f) use of the resource, it is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section D, all Project alternatives will result in a Section 4(f) use of the Seaboard Air Line Railroad corridor. As described above, it is not possible for the Project alternatives to avoid a use of the railroad corridor. Therefore, FRA has determined that an avoidance alternative for Wynnhurst is not prudent per 23 CFR 774.17.

Although the VA2 alternative also would not result in a Section 4(f) use of Wynnhurst, it would result in a severe amount of wetland impacts within Section D of the Project. This alternative would also result in a Section 4(f) use of the Seaboard Air Line Railroad corridor.

The VA1 and VA3 Project alternatives would result in a Section 4(f) use of the Wynnhurst property. These alternatives would also result in a Section 4(f) use of the Seaboard Air Line Railroad corridor.

5.10.10 ORGAIN HOUSE, TOURIST GUEST HOUSE, AND OAK SHADES (VA)

The Preferred Alternative in Section G is VA3. The four Project alternatives within Section G were designed at various stages of the Project development process. Initially, the VA1 and VA2 alternatives were developed to straighten the "S" curves through Section G while generally following the existing inactive railroad corridor (with the VA2 alternative more closely following the corridor than VA1). Subsequent cultural resource investigations determined that both alternatives would result in a Section 4(f) use of the Oak Shades historic resource. Alternative VA3 was then developed in an attempt to avoid impacts to Oak Shades. However, the Tourist Guest House was identified along the VA3 alignment, and the VA3 alternative would require a Section 4(f) use of this resource. Based on this information and public comments, the VA4 alternative was developed in an effort to avoid impacts to both Oak Shades and the Tourist Guest House. However, the Orgain House was identified along the VA4 alignment, and the VA4 alternative would result in a Section 4(f) use of this resource.

Given the constraints above, it was not possible to develop a prudent and feasible Project alternative that would avoid a use of all Section 4(f) resources within Section G. An avoidance alternative of the Orgain House, Tourist Guest House, and Oak Shades would require relocating the rail alignment significantly east of the existing inactive railroad corridor or west of US 1 (Boydton Plank Road). Such relocation would require a new bridge across the Meherrin River, which would represent a substantial Project cost. Crossing US 1 would also require an additional road bridge. In addition, relocating the alternatives would impact land that is either currently used for other purposes or undeveloped. This would cause unacceptable and severe adverse social and environmental impacts such as property impacts and impacts to natural resources. Cumulatively, FRA has determined that these impacts are not prudent per 23 CFR 774.17.

5.10.11 WRIGHT FARMSTEAD (VA)

Although the Preferred Alternative in Section J (VA2) is located more than 500 feet from the boundary of the Wright Farmstead and will not require a Section 4(f) use of the resource, it is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section J, all Project alternatives will result in a Section 4(f) use of the Seaboard Air Line Railroad corridor. As described above, it is not possible for the Project alternatives to avoid a use of the railroad corridor. Therefore, FRA has determined that an avoidance alternative for Wright Farmstead is not prudent per 23 CFR 774.17.

The VA1 and VA3 Project alternatives, which are on common alignment, would result in a Section 4(f) use of the Wright Farmstead within Section J of the Project. Their alignment runs directly through the western two-thirds of the resource. These alternatives would also result in a Section 4(f) use of the Seaboard Air Line Railroad corridor.

5.10.12 BRACEY HISTORIC DISTRICT (VA)

Although the Preferred Alternative in Section K (the common alignment of VA1 and VA3) will construct a new rail alignment west of the original Seaboard Air Line tracks, outside of the Bracey Historic District, and will not result in a Section 4(f) use of the resource, it is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section K, all Project alternatives will result in a Section 4(f) use of the Seaboard Air Line Railroad corridor. As described above, it is not possible for the Project alternatives to avoid a use of the railroad corridor. Therefore, an avoidance alternative for Bracey Historic District is not prudent per 23 CFR 774.17.

The VA2 Project alternative would result in a Section 4(f) use of the Bracey Historic District within Section K of the Project. It would result in construction directly adjacent to the Bracey Railroad Depot, which is a contributing element to the historic district. This alternative would also result in a Section 4(f) use of the Seaboard Air Line Railroad corridor.

5.10.13 GRANITE HALL/FITTS HOUSE (VA)

Although the Preferred Alternative in Section L (the common alignment of VA1 and VA3) is located approximately 700 feet west of the Granite Hall/Fitts House, and will not result in a Section 4(f) use of the resource, it is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section L, all Project alternatives will result in a Section 4(f) use of the Seaboard Air Line Railroad corridor. As described above, it is not possible for the Project alternatives to avoid a use of the railroad corridor. Therefore, FRA has determined that an avoidance alternative for the Granite Hall/Fitts House is not prudent per 23 CFR 774.17.

The VA2 Project alternative would result in a Section 4(f) use of Granite Hall/Fitts House within Section L of the Project. The fill slope for the new bridge on Route 712 would be located in front of the main house. This alternative would also result in a Section 4(f) use of the Seaboard Air Line Railroad corridor.

5.10.14 HOLLOWAY FARM (NC)

Although the Preferred Alternative in Section O (NC3) is located more than 500 feet from Holloway Farm and will not result in a Section 4(f) use of the resource, it is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section O, all Project alternatives will 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, FRA has determined that an avoidance alternative for Holloway Farm is not prudent per 23 CFR 774.17.

The NC1 and NC2 Project alternatives would bisect the Holloway Farm and result in a Section 4(f) use of the resource. This alternative would also result in a Section 4(f) use of the Raleigh and Gaston Railroad corridor.

5.10.15 GULF PETROLEUM PRODUCTS WAREHOUSE (NC)

The Preferred Alternative in Section V (NC5), as well as the NC1, NC2, and NC3 Project alternatives, will all require a Section 4(f) use of the Gulf Petroleum Products Warehouse. An avoidance alternative is not prudent for several reasons. First, an avoidance alternative in the same general location as the existing alternatives would require the use of retaining walls in a "cut" area. Without a structural analysis of the existing structures and geotechnical properties of the existing ground, it is not possible to determine if a retaining wall would undermine the integrity of the structures. Such an analysis will take place during the final design stage of the Project.

Second, an avoidance alternative that shifts the Richmond to Raleigh Project rail alignment to the east to avoid the Gulf Petroleum Products Warehouse property entirely would conflict with the existing, active rail (CSX) that is located immediately east of the resource (i.e., the Gulf Petroleum Products Warehouse property abuts the railroad ROW). This would result in a "chain reaction" of impacts. A shift of the Richmond to Raleigh Project tracks would require a shift in the CSX tracks to maintain a safe distance between the CSX tracks and the Richmond to Raleigh Project tracks. This shift of the CSX tracks would encroach into the right of way Triangle Transit purchased from CSX for the planned future light rail corridor. It would also require a shift of the at-grade crossing between CSX and Norfolk Southern. As a result, Triangle Transit would need to shift their alignment east, which would result in a conflict with the Atlantic Avenue bridge south of Whitaker Mill Ave and Triangle Transit's proposed station platform. All of the components of this "chain reaction" would have substantial costs and would be complicated by the existing active railroad traffic in the area.

These unique problems cumulatively cause impacts of extraordinary magnitude; therefore, FRA has determined that an avoidance alternative for the Gulf Petroleum Products Warehouse is not prudent per 23 CFR 774.17.

5.10.16 ROANOKE PARK HISTORIC DISTRICT (NC)

The Preferred Alternative in Section V (NC5) is located across Capital Boulevard from the Roanoke Park Historic District and will not result in a Section 4(f) use of the resource. However, it is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section V, all Project alternatives will 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 the Roanoke Park Historic District is not prudent per 23 CFR 774.17.

Although the NC1 and NC2 Project alternatives would not result in a Section 4(f) use of the Roanoke Park Historic District, they are also not avoidance alternatives because they would use other resources protected under Section 4(f) within the same section of the 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. In addition, they would result in a Section 4(f) use of the Raleigh and Gaston Railroad corridor.

The NC3 alternative would take ROW from the eastern boundary of the Roanoke Park Historic District and result in a Section 4(f) use of the resource. In addition, it would result in a Section 4(f) use of the Raleigh and Gaston Railroad corridor.

5.10.17 RALEIGH ELECTRIC COMPANY POWER HOUSE (NC)

The Preferred Alternative in Section V (NC5) will not require ROW from the Raleigh Electric Company Power House and FRA has determined that the proximity impacts do not cause a

substantial impairment to the resource; therefore, the impacts do not constitute a Section 4(f) use of the Raleigh Electric Company Power House. However, the Preferred Alternative is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section V, all Project alternatives will 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 the Roanoke Park Historic District is not prudent per 23 CFR 774.17.

Although the NC3 Project alternative would not result in a Section 4(f) use of 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 Project. Within Section V, NC3 would result in a Section 4(f) use of the Roanoke Park Historic District. In addition, it would result in a Section 4(f) use of the Raleigh and Gaston Railroad corridor.

The NC1 and NC2 alternatives would require minor amount of ROW from the Raleigh Electric Company Power House in order to bridge West Jones Street and would result in a Section 4(f) use of the resource. In addition, they would result in a Section 4(f) use of the Raleigh and Gaston Railroad corridor.

5.10.18 CAROLINA POWER AND LIGHT COMPANY CAR BARN AND AUTOMOBILE GARAGE (NC)

The Preferred Alternative in Section V (NC5) will not require ROW from the Carolina Power and Light Company Car Barn and Automobile Garage and FRA has determined that the proximity impacts do not cause a substantial impairment to the resource; therefore, the impacts do not constitute a Section 4(f) use of the Raleigh Electric Company Power House. However, the Preferred Alternative is not an avoidance alternative because it will use another resource protected under Section 4(f) within the same section of the Project. Within Section V, all Project alternatives will 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 the Roanoke Park Historic District is not prudent per 23 CFR 774.17.

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 Project. Within Section V, NC3 would result in a Section 4(f) use of the Roanoke Park Historic District. In addition, it would result in a Section 4(f) use of the Raleigh and Gaston Railroad corridor.

The NC1 and NC2 alternatives would require minor amount of ROW from the Carolina Power and Light Company Car Barn and Automobile Garage in order to bridge West Jones Street and would result in a Section 4(f) use of the resource. In addition, they would result in a Section 4(f) use of the Raleigh and Gaston Railroad corridor.

5.10.19 RALEIGH AND GASTON RAILROAD CORRIDOR (NC)

The Raleigh and Gaston Railroad corridor spans Sections M through V of the Project. 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 result in 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, acquiring the required ROW would result in significantly greater Project costs. Cumulatively, these impacts are not prudent per 23 CFR 774.17.

5.10.20 SUMMARY

In summary, there are 27 historic resources where one or more of the Project alternatives would result in a Section 4(f) use (not de minimis). Due to the unavoidable Section 4(f) use of the Seaboard Air Line Railroad corridor in Virginia and Raleigh and Gaston Railroad corridor in North Carolina, there are no instances 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.

5.11 LEAST OVERALL HARM ANALYSIS

According to Section 4(f), where the above analysis determined that there is no feasible and prudent avoidance alternative, the alternative that causes the least overall harm to Section 4(f) resources must be selected. The following discussion identifies the least overall harm alternative by Project section using the factors identified in 23 CFR 774.3(c):

(1) The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);

(2) The relative severity of remaining harm, after mitigation, to the protected activities, attributes, or; features that qualifies each property for Section 4(f) protection;

(3) The relative significance of each Section 4(f) property;

(4) The views of the officials with jurisdiction over each Section 4(f) property;

(5) The degree to which each alternative meets the Project purpose and need;

(6) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f);

(7) Substantial differences in costs among the alternatives.

5.11.1 SECTION AA (VA)

All alternatives are on common alignment in Section AA and would require a Section 4(f) use of the Seaboard Air Line Railroad corridor, Atlantic Coast Line Railroad corridor, Williams Bridge Company, and the Richmond & Petersburg Electric Railway. Because all alternatives are identical, a least harm analysis is not appropriate in this section of the Project.

5.11.2 SECTION BB (VA)

All alternatives are on common alignment in Section BB and would require a Section 4(f) use of the Chester Historic District, Eichelberger House, Richmond & Petersburg Electric Railroad, Atlantic Coast Line Railroad corridor, and the Seaboard Air Line Railroad corridor. Because all alternatives would result in the same harm to the resources, a least harm analysis is not appropriate in this section of the Project.

5.11.3 SECTION CC (VA)

All alternatives are on common alignment in Section CC and would require a Section 4(f) use of the Defense Road, Dimmock Line/Earthworks, Bridge over Defense Road, Richmond & Petersburg Electric Railroad, Atlantic Coast Line Railroad corridor, and the Seaboard Air Line

Railroad corridor. Because all alternatives are identical, a least harm analysis is not appropriate in this section of the Project.

5.11.4 SECTION DD (VA)

The Project alternatives within Section DD would all require a use of the Seaboard Air Line Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section DD is the VA3 alternative. The Preferred Alternative (which has the shortest bridge length) is the least visually intrusive to the Weldon Railroad/Globe Tavern battlefield. Alternatives VA1 and VA2 would require less ROW from the battlefield, but would have a greater visual impact to the surrounding area. In addition, the ROW required for the Preferred Alternative can be landscaped to blend into the surrounding viewshed. This determination was validated in coordination with historians from the National Park Service (Petersburg National Battlefield) at a meeting on February 26, 2009.

5.11.5 SECTION A (VA)

The Project alternatives within Section A would all require a use of the Seaboard Air Line Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section A is the VA2 alternative. The Preferred Alternative has the fewest wetland and stream impacts; similar impacts to historic resources compared to the VA1/VA3 alternative; a better operability rating; and accommodates higher speeds.

5.11.6 SECTION B (VA)

The Project alternatives within Section B would all require a use of the Seaboard Air Line Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section B is the common alignment of the VA1 and VA3 alternatives. The Preferred Alternative has greater impacts to forested uplands and prime and other important farmland, two more residential relocations, and a larger total cost compared to the VA2 Alternative. However, VA2 has had a much lower limiting speed and a negative rating for operability and constructability. In addition, VA2 has five more potential noise and vibration impacts (compared to the Preferred Alternative) and one business relocation (whereas the Preferred Alternative has none).

5.11.7 SECTION C (VA)

All alternatives are on common alignment in Section C and would require a Section 4(f) use of the Seaboard Air Line Railroad corridor. Because all alternatives are identical, a least harm analysis is not appropriate in this section of the Project.

5.11.8 SECTION D (VA)

The Preferred Alternative (VA4) is the alternative within Section D that causes the least overall harm to Section 4(f) resources. It would require a use of the Seaboard Air Line Railroad corridor (as would the VA1, VA2, and VA3 alternatives), but would not require a use of Wynnhurst. Compared to the VA1, VA2, and VA3 alternatives, the Preferred Alternative also avoids an impact to a species protected under the Endangered Species Act, while the VA1 and VA3 alternatives would result in an impact. In addition, the Preferred Alternative has fewer stream

and wetland impacts than the VA2 alternative. All efforts will be made during final design to further avoid and minimize impacts to streams and wetlands.

5.11.9 SECTION E (VA)

The Project alternatives within Section E would all require a use of the Seaboard Air Line Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section E is the common alignment of the VA1 and VA3 alternatives. The Preferred Alternative has fewer wetland and stream impacts, residential relocations, and vibration impacts when compared to the VA2 alternative, as well as a lower cost. The Preferred Alternative also has a better operability and constructability rating.

5.11.10 SECTION F (VA)

All alternatives are on common alignment in Section F and would require a Section 4(f) use of the Seaboard Air Line Railroad corridor. Because all alternatives are identical, a least harm analysis is not applicable in this section of the Project.

5.11.11 SECTION G (VA)

The four Project alternatives within Section G vary and would all require a use of at least one historic resource. The following factors were included in the least overall harm analysis:

- Preferred Alternative (VA3) – Section 106 adverse effect and Section 4(f) use of Tourist Guest House; 500 feet of stream impacts; positive rating for operability and constructability; total cost of $36.92 million
- VA1 Alternative – Section 106 adverse effect and Section 4(f) use of Oak Shades; 654 feet of stream impacts; neutral rating for operability and constructability (which is related to the ability of the alternative to meet the purpose and need for the Project); total cost of $36.46 million
- VA2 Alternative – Section 106 adverse effect and Section 4(f) use of Oak Shades; 914 feet of stream impacts; negative rating for operability and constructability; total cost of $29.47 million
- VA4 Alternative – Section 106 adverse effect and Section 4(f) use of Orgain House; 1,095 feet of stream impacts; positive rating for operability and constructability; total cost of $40.73 million.

Input from the cultural and natural resource agencies was also used to evaluate the alternatives. In a discussion with VDHR on October 11, 2011, it was determined that:

- VA4 alternative would have the most substantial impact to historic resources (because the main house on the Orgain property is within its construction limits)
- VA1 alternative would have the second most substantial impact (because it would bring the rail alignment within 50 feet of the main house on the Oak Shades property)
- The impacts of the VA2 alternative (to Oak Shades) and Preferred Alternative (to the Tourist Guest House) can be mitigated. Such mitigation could include landscaping to shield visual impacts and documentation of the history of these resources.

From a water resources perspective, the resource agencies endorsed the Preferred Alternative. In a correspondence dated May 25, 2011, VDEQ noted that while they "recognize the problems associated with impacting the Tourist Guest House and/or Oak Shades," they identified the VA3 alternative as "the least environmentally damaging option that preserves the operational purpose

of the Project, followed by VA1." Subsequently, in a letter dated June 29, 2011, USACE stated that they believe the VA3 alternative is the "least environmentally damaging practicable alternative" in Section G and noted that if another alternative was selected, "further avoidance and minimization will have to be incorporated into the Project to reduce the impacts to aquatic resources of the selected alternative to a level comparable to or less than those of VA3 in order for [them] to consider authorizing it."

Based on the above, the Preferred Alternative is the least overall harm alternative in Section G because it is possible to mitigate the impacts to the Tourist Guest House, the impacts to historic resources are not as severe (compared to the VA2 and VA4 alternatives), it minimizes impacts to streams (of all alternatives), and it meets the purpose and need for the Project to the greatest degree (compared to the VA1 and VA2 alternatives, which do not have positive operability and constructability).

5.11.12 SECTION H (VA)

The Project alternatives within Section H would all require a use of the Seaboard Air Line Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section H is the common alignment of the VA1 and VA3 alternatives. The Preferred Alternative has fewer impacts to streams, prime and important farmland, and forested uplands; along with fewer noise and vibration impacts. Although the Preferred Alternative has a somewhat higher total cost, the long-term maintenance cost will be lower compared to the VA2 alternative.

5.11.13 SECTION I (VA)

The Project alternatives within Section I would all require a use of the Seaboard Air Line Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and the VA2 alternative have identical impacts to water resources with nominal stream impacts and no wetlands impacts. However, the Preferred Alternative has fewer impacts to prime and important farmland and forested uplands and a lower cost.

5.11.14 SECTION J (VA)

The Preferred Alternative (VA2) is the alternative within Section J that causes the least overall harm to Section 4(f) resources. It would require a use of the Seaboard Air Line Railroad corridor (as would the VA1 and VA3 alternatives), but would not require a use of the Wright Farmstead. Compared to the VA1 and VA3 alternatives, the Preferred Alternative has fewer impacts to streams and similar impacts to other resources. The Preferred Alternative also has similar costs to the VA1 and VA3 alternatives. However, the Preferred 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.

5.11.15 SECTION K (VA)

The Preferred Alternative (the common alignment of VA1 and VA3) is the alternative within Section K that causes the least overall harm to Section 4(f) resources. It would require a use of the Seaboard Air Line Railroad corridor (as would the VA2 alternative), but would not require a use of the Bracey Historic District. Compared to the VA2 alternative, the Preferred Alternative minimizes impacts to streams, wetlands, and prime and important farmlands. It also has a better

operability and constructability rating, which would result in lower long-term maintenance for the rails and train equipment.

5.11.16 SECTION L (VA/NC)

The Preferred Alternative (the common alignment of VA1/NC1 and VA3/NC3) is the alternative within Section L that causes the least overall harm to Section 4(f) resources. It would require a use of the Seaboard Air Line Railroad corridor (as would the VA2/NC2 alternative), but would not require a use of Granite Hall/Fitts House. Compared to the VA2 alternative, the Preferred Alternative has greater stream and wetland impacts compared to VA2/NC2, but fewer impacts to prime and important farmlands, less residential relocation, fewer noise and vibration impacts, and a lower total cost. It also has a neutral constructability and operability rating (compared to a negative rating for the VA2/NC2 alternative) and has better support from the public.

5.11.17 SECTION M (NC)

The Preferred Alternative (NC1) is the alternative within Section M that causes the least overall harm to Section 4(f) resources. Within Section M, the Project alternatives would all require a use of the Raleigh and Gaston Railroad corridor. The Preferred Alternative in Section M is the common alignment of the NC1 and NC3 alternatives. While throughout the remainder of North Carolina, the alternatives generally have the same impacts to the resource, the impacts vary to a greater degree in Section M. In this section, the Preferred Alternative would not impact a repeater tower that is a contributing element to the resource, whereas Alternative NC2 would require its relocation. In addition, the Preferred Alternative minimizes stream impacts and has fewer impacts to forested uplands compared to the NC2 alternative. Neither alternative would impact wetlands. Based on these impacts, Preferred Alternative would result in the least overall harm to Section 4(f) resources in Section M.

5.11.18 SECTION N (NC)

The Project alternatives within Section N would all require a use of the Raleigh and Gaston Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section N is the common alignment of the NC1 and NC3 alternatives. The Preferred Alternative minimizes impacts to streams, prime and important farmlands, and forested uplands compared to the NC2 alternative. It also has less residential relocations and potentially impacted noise receptors.

5.11.19 SECTION O (NC)

The Preferred Alternative (NC3) alternative 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 Preferred Alternative would result in fewer impacts to wetlands, greater impacts to streams, fewer noise and vibration impacts, and fewer relocations. Although the difference in stream impacts is significant (3,102 feet for NC3 compared to 693 feet for NC1 and 915 feet for NC2), those impacts would be fully mitigated.

5.11.20 SECTION P (NC)

All alternatives are on common alignment in Section P and would require a Section 4(f) use of the Henderson Historic District, South Henderson Industrial Historic District, and Raleigh and

Gaston Railroad corridor. Because all alternatives are identical, a least harm analysis is not appropriate in this section of the Project.

5.11.21 SECTION Q (NC)

The Preferred Alternative (NC1) is the alternative within Section M that causes the least overall harm to Section 4(f) resources. The Project alternatives within Section Q would all require a use of the Raleigh and Gaston Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative in Section Q is the common alignment of the NC1 and NC3 alternatives. This alternative meets the purpose and need of the Project to a greater degree than the NC2 alternative because the NC2 alternative has a lower limiting speed and negative rating for operability and constructability. The Preferred Alternative has slightly greater impacts to prime and important farmland and forested uplands, and three more residential relocations compared to the NC2 alternative, but otherwise the impacts are comparable between alternatives.

5.11.22 SECTION R (NC)

The Project alternatives within Section R would all require a use of the Raleigh and Gaston Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section R is the common alignment of the NC1 and NC3 alternatives. This alternative meets the purpose and need of the Project to a greater degree than the NC2 alternative (based on the more favorable operability and constructability rating). Otherwise, it has a similar degree of impacts to the human and natural environment compared to the NC2 alternative.

5.11.23 SECTION S (NC)

Within Section S, all alternatives are on common alignment through the Franklinton Historic District and would require a Section 4(f) use of the resource. In addition, all alternatives would require a use of the Raleigh and Gaston Railroad corridor and would have a similar degree of impacts to the resource. Therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative in Section S is the common alignment of the NC1 and NC3 alternatives. This alternative has strong public support and a smaller impact to streams. Other impacts to the human and natural environment are similar across the Project alternatives.

5.11.24 SECTION T (NC)

The Project alternatives within Section T would all require a use of the Raleigh and Gaston Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section T is the common alignment of the NC1 and NC3 alternatives. This alternative meets the purpose and need of the Project to a greater degree than the NC2 alternative (based on the more favorable operability and constructability rating). The Preferred Alternative has slightly greater impacts to streams, wetlands, farmland and forested uplands than the NC2 alternative. However, the greater stream and wetland impacts for the Preferred Alternative (approximately 300 feet of stream and less than 0.1 acre of wetlands) are not significant in light of the entire Project and would be fully mitigated. Further, there would likely be 100 feet more stream impacts associated with the NC2 alternative

as a result of a railroad detour route required during construction, so the effective difference in stream impacts is closer to 200 feet.

5.11.25 SECTION U (NC)

The Project alternatives within Section U would all require a use of the Raleigh and Gaston Railroad corridor. All alternatives would have a similar degree of impacts to the resource; therefore, the least overall harm alternative is based on the other factors described in 23 CFR 774.3(c). The Preferred Alternative and overall least harm alternative in Section U is the NC1 alternative. While all three alternatives have some degree of impact on the baseball complex, the NC1 alternative would be least harmful to its operation. Although The Factory is a private facility, its construction costs were defrayed by a grant from Wake County, NC, in recognition of the financial contributions of visitors attending annual tournaments. The facility is required to host baseball and softball tournaments throughout each year as a condition of the grant. Additionally, the NC1 alternative would avoid impacts to a large planned apartment complex located along Rogers Road.

5.11.26 SECTION V (NC)

The NC5 alternative is the alternative within Section V that causes the least overall harm to Section 4(f) resources and is the Preferred Alternative in this section of the Project. It would require a use of the Gulf Petroleum Products Warehouse, Depot Historic District Proposed Boundary Amendment, and Raleigh and Gaston Railroad corridor (as would the NC1, NC2, and NC3 alternatives), but would not require a use of the Roanoke Park Historic District, Raleigh Electric Company Power House, or Carolina Power and Light Company Car Barn, which are impacted by one or more of the other alternatives. Compared to the NC1, NC2, and NC3 alternatives, the NC5 alternative would result in the fewest impacts to streams, no residential relocations, fewer business relocations compared to NC3 (but greater than NC1 and NC2), and only one severely impacted noise receptor (compared to 40 for the other alternatives).

5.12 MEASURES TO MINIMIZE HARM

The discussion of measures to minimize harm focuses on the 16 resources where the Preferred Alternative in a section of the Project would result in a Section 4(f) use. Resources are ordered from north to south as they appear in the Richmond to Raleigh Project Study Area. 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 are being developed though coordination under Section 106 of the NHPA with the FRA, ACHP, VDHR, NC-HPO, and consulting parties. The process being used for compliance with Section 106 is outlined in a draft Programmatic Agreement (PA) for the SEHSR Corridor that is provided for public comment in Appendix K of this FEIS. After the PA is executed by the signatories, an MOA will be developed for both the Virginia and North Carolina portions of the Richmond to Raleigh Project that specifies the mitigation measures for impacts to historic resources, including the 16 resources where the Project would result in a Section 4(f) use. The MOAs will be included in the ROD for the Project.

5.12.1 SEABOARD AIR LINE RAILROAD CORRIDOR (VA)

The Project alternatives do not impact the vast majority of contributing elements to the Seaboard Air Line Railroad corridor. The rail improvements will be located within the existing rail corridor. Historically, the corridor contained two to three sets of parallel tracks. Over the years,

the number of tracks have been reduced, thus now the corridor only contains one or two sets of tracks within the wider right-of-way. The addition of an additional set of tracks will return most of the corridor to its original historic appearance and configuration. In addition, the existing tracks have been replaced with in-kind materials numerous times over the past 150 years including new rails, cross ties, spikes, and ballast.

The impacts to the rail bridge over US 1 South in Alberta cannot be minimized because the Project requires this structure to be replaced. The bridge is a contributing element to the resource as a whole. It is emblematic of early-twentieth century bridge construction associated with the development of the Route 1 corridor in this area. Mitigation has not been determined, but initial dialogues with the Virginia DRPT and VDHR suggest that thorough Historic American Engineering Record (HAER)-level documentation (including drawings and large-format photography) prior to removal followed by a study of rail-related bridges along the Route 1 corridor in this area may be warranted, as it could develop a context for similar structures in the area for future evaluations of other transportation projects. The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with FRA, VDHR, and CSX.

5.12.2 ATLANTIC COAST LINE RAILROAD CORRIDOR (VA)

The Project alternatives do not impact the vast majority of contributing elements to the Atlantic Coast Line Railroad, as it has many of the same design considerations and historical modifications noted above regarding the Seaboard Airline Railroad. The impacts to the utility bridge for the crossing of the Richmond & Petersburg Electric Railway and the abandoned abutments associated with the historic alignment of Highway 10 cannot be minimized because the Project requires these structures to be replaced. Dialogues on mitigation are ongoing. Initial concepts include HAER-level documentation (including drawings and large-scale photography) of the abutments prior to demolition and the creation of a narrative on the historic of the Richmond & Petersburg Electric Railway for public dissemination. The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, VDHR, and CSX.

5.12.3 WILLIAMS BRIDGE COMPANY (VA)

Members of the 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 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.

The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, VDHR, and the resource owner.

5.12.4 RICHMOND & PETERSBURG ELECTRIC RAILWAY (VA)

The Project alternatives do not impact the vast majority of contributing elements to the Richmond & Petersburg Electric Railway such as the general corridor's setting and feeling and other contributing structures along the rail corridor. The impacts to the utility bridge south of Highway 10 in Chester cannot be minimized because the Project requires these structures to be replaced. Mitigation activities suggested to date include HAER-level documentation of the structure prior to removal (including measured drawings and large-scale photography). The historic context developed for the electric railway mentioned above under the Atlantic Coast Line Railway (see Section 5.12.2) could also function to mitigate the adverse effects to the electric railway itself. The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, VDHR, and CSX.

5.12.5 CHESTER HISTORIC DISTRICT (VA)

Members of the 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 Project Team at a later date. Possible mitigation measures suggested by the Richmond to Raleigh Project 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 Richmond to Raleigh Project 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.

The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, VDHR, and resource owner in the district.

5.12.6 EICHELBERGER HOUSE (VA)

Members of the 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 Project Team will follow up with him about this opportunity during the development of the Section 106 MOA for the Project.

The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, VDHR, and the resource owner.

5.12.7 DEFENSE ROAD, DIMMOCK LINE/EARTHWORKS, AND BRIDGE OVER DEFENSE ROAD (VA)

Members of the 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 Section 106 MOA that is developed for the Project.

5.12.8 TOURIST GUEST HOUSE (VA)

The Project Team sent a certified letter to the owner of the Tourist Guest House on July 29, 2013, explaining the impact of the Preferred Alternative on his property and inviting him to participate in the development in the Section 106 MOA. Subsequently, the owner has communicated with the Project Team by phone (due to the fact that he resides in California). Discussions on the mitigation are also underway with the VDHR and Virginia DRPT. Mitigation activities recommended to date include a NRHP nomination for the Tourist Guest House, the development of a historic context for travel-related architecture in Southside Virginia, and vegetative screening to block the view of the new rail corridor from the main house. The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, VDHR, and the property owner.

5.12.9 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 Richmond to Raleigh Project Tier II 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 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.”

The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, VHDR, and resource owners in the district.

5.12.10 HENDERSON HISTORIC DISTRICT AND PROPOSED BOUNDARY EXTENSION (NC)

Members of the 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 Project Team met with the NC-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

The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, NC-HPO, and resource owners in the district.

5.12.11 SOUTH HENDERSON INDUSTRIAL HISTORIC DISTRICT (NC)

Members of the 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 Richmond to Raleigh Project Tier II DEIS were based on input provided at the meetings.

In order to minimize property impacts within the South Henderson Industrial District, the Richmond to Raleigh Project Tier II DEIS showed that 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 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 expressed concern about the impact that the closure of Nicholas Street would have on travel patterns with the district, particularly for truck traffic. The Project Team reevaluated the closure of Nicholas Street in coordination with NC-HPO, the Town of Henderson, and the resource owners, and adjusted the FEIS designs to allow Nicholas Street to remain open at Alexander Avenue, despite the fact that additional ROW was needed within the historic district.

The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, NC-HPO, and resource owners in the district.

5.12.12 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 Preferred Alternative includes two pedestrian-only grade-separated crossings of the railroad to accommodate the non-motorized traffic through the historic downtown area (at Mason Street and College Street). In addition, the vehicular underpass at Greene Street was designed to include pedestrian sidewalks. The Preferred Alternative also includes 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.

Based on input from representatives of the Town of Franklinton, Capital Area Metropolitan Planning Organization, and NC-HPO obtained during meetings subsequent to publication of the

Richmond to Raleigh Project Tier II DEIS, the pedestrian crossing proposed as an overpass of Mason Street in the Richmond to Raleigh Project Tier II DEIS was redesigned as an underpass for the FEIS. This redesign will be less visually intrusive to the historic district than an overpass. The final designs for the underpass will be developed in coordination with representatives from the Town so that they may provide input regarding the appearance of the structure and associated landscaping.

The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, NC-HPO, and resource owners in the district.

5.12.13 GULF PETROLEUM PRODUCTS WAREHOUSE (NC)

The Project Team sent a certified letter to the owner of the Gulf Petroleum Products on July 29, 2013, explaining the impact of the Preferred Alternative on his property and inviting him to participate in the development of the Section 106 MOA for the Project. To date, no response has been received. Based on input from NC-HPO, if the Project requires demolition of the warehouse and main building, the Project will provide photo documentation of the warehouse and main building prior to construction. As noted above, efforts will be during the final design stage of the project to use retaining walls, if possible, to avoid demolition of the structures. The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, NC-HPO, and CSX.

5.12.14 RALEIGH AND GASTON RAILROAD CORRIDOR (NC)

The 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. Based on input from NC-HPO, the Project will fund a contextual study of the impacts of railroads in North Carolina, which can be used to evaluate the effects of future Projects on historic railroad structures and corridors. The specific mitigation measures for the Project will be determined during development of the Section 106 MOA for the Project based on coordination with the FRA, NC-HPO, and CSX.

5.13 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, November 20, 2009, September 27, 2010, October 4, 2013, November 6, 2013, January 10, 2014, and March 20, 2014. Similar determination of effects meetings with NC-HPO were held on August 20, 2008, September 2, 2009, September 29, 2009, July 12, 2011, and June 17, 2013.

The following discussion describes the coordination between the 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 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 Richmond to Raleigh Project Study Area.

5.13.1 SEABOARD AIR LINE RAILROAD CORRIDOR (VA)

The Project Team met with representatives of CSX Transportation on January 31, 2013, to discuss the impact of the Project on the Seaboard Air Line Railroad corridor and Raleigh and Gaston Railroad corridor, which are currently owned by CSX. In addition, the Project Team invited CSX to participate in the Section 106 process as a consulting party. On March 8, 2013, CSX confirmed their status as a consulting party.

5.13.2 WILLIAMS BRIDGE COMPANY (VA)

A Richmond to Raleigh Project 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.

5.13.3 ATLANTIC COAST LINE RAILROAD CORRIDOR AND RICHMOND & PETERSBURG ELECTRIC RAILWAY (VA)

The contributing elements to the Atlantic Coast Line Railroad corridor and Richmond & Petersburg Electric Railway are within active railroad ROW owned by CSX. CSX is a consulting party in the Section 106 process and will be invited to comment on methods to mitigate for the impacts to these resources as part of the development of the Section 106 MOA.

5.13.4 RESOURCES LOCATED IN CHESTERFIELD COUNTY (VA)

The 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.

5.13.5 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.

5.13.6 TOURIST GUEST HOUSE (VA)

The Project Team sent a certified letter to the owner of the Tourist Guest House on July 29, 2013, explaining the impact of the Preferred Alternative on his property and inviting him to participate in the development in the Section 106 MOA. Subsequently, the owner has communicated with the Project Team by phone (due to the fact that he resides in California). He has provided suggestions for potential mitigation for the impacts to his property and has agreed to participate in the development of the MOA.

5.13.7 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.

5.13.8 HENDERSON HISTORIC DISTRICT AND PROPOSED EXTENSION AND SOUTH HENDERSON INDUSTRIAL HISTORIC DISTRICT (NC)

Members of the 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 Richmond to Raleigh Project Section 106 process. A meeting to discuss the impact of the Project on the districts and potential minimization and mitigation measures was held on March 10, 2010, with representation from eight property owners within the districts.

5.13.9 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 Richmond to Raleigh Project Section 106 process. A meeting to discuss the impact of the Project on the district and potential minimization and mitigation measures was held on December 19, 2011, with representation from the Town of Franklinton, Capital Area Metropolitan Planning Organization, and NC-HPO.

5.13.10 GULF PETROLEUM PRODUCTS WAREHOUSE (NC)

The Project Team sent a certified letter to the owner of the Gulf Petroleum Products on July 29, 2013, explaining the impact of the Preferred Alternative on his property and inviting him to participate in the development in the Section 106 MOA. To date, no response has been received.

5.13.11 RALEIGH AND GASTON RAILROAD CORRIDOR (NC)

The Project Team met with representatives of CSX Transportation on January 31, 2013, to discuss the impact of the Project on the Seaboard Air Line Railroad corridor and Raleigh and Gaston Railroad corridor, which are currently owned by CSX. In addition, the Project Team invited CSX to participate in the Section 106 process as a consulting party. On March 8, 2013, CSX confirmed their status as a consulting party.

5.13.12 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 Project (* indicates acceptance of invitation):

- Advisory Council on Historic Preservation*
- 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*
- Preservation North Carolina*
- Raleigh Historic Districts Commission (NC)*
- Southside Virginia Genealogical Society
- Virginia Council on Indians* (invitation accepted, but organization no longer active).

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 Richmond to Raleigh Project Section 106 process. There are no historic societies within the counties where these districts are located.

5.13.13 US DEPARTMENT OF INTERIOR

The US Department of Interior (DOI) was provided with this revised Section 4(f) Evaluation for review during the fall of 2014.

5.14 FINAL SECTION 4(F) DETERMINATION

The FRA will make its Section 4(f) approval as part of the ROD for this Project.