

FEDERAL HIGHWAY ADMINISTRATION

FINDING OF NO SIGNIFICANT IMPACT

FOR

ROUTE: Interstate 95 Rappahannock River Crossing Project

LOCATION: Stafford County, Spotsylvania County, and City of Fredericksburg, Virginia

STATE PROJECT: 0095-111-259, P101; UPC 101595
0095-111-270, P101; UPC 105510

The Federal Highway Administration has determined that this project will have no significant impact on the environment. This Finding of No Significant Impact is based on the approved Environmental Assessment and the Revised Environmental Assessment which have been independently evaluated by the Federal Highway Administration and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

11/17/15

Date

John Simkins

for: FHWA Division Administrator

Rationale for the Finding of No Significant Impact

Interstate 95 Rappahannock River Crossing Project
State Project Numbers: 0095-111-259, P101; UPC 101595 &
0095-111-270, P101; UPC 105510

We have reviewed the Virginia Department of Transportation's November 9th, 2015 letter requesting a Finding of No Significant Impact, which includes the Revised Environmental Assessment (REA), and the summarized transcript from the Location Public Hearing. The REA is attached to the Finding of No Significant Impact (FONSI) and is hereby incorporated by reference into this rationale supporting the FONSI.

Existing Interstate 95 (I-95) through the study area has three general purpose travel lanes in both the northbound and southbound directions, with acceleration and deceleration lanes at the on- and off-ramps of the VA 3 and US 17 interchanges. At the US 17 interchange, in the northbound direction, the general-purpose lanes are supplemented by a one-lane collector-distributor roadway (with an additional lane between the loop ramps). In the southbound direction, just south of the Rappahannock River, there are existing on and off-ramps that serve the Fredericksburg Safety Rest Area/Welcome Center. VA 3 is a primary route that is mostly six lanes through the study area vicinity, with additional turn lanes at intersections. US 17 is a primary route that is collocated with the six-lane I-95 and separates at Exit 133 as Warrenton Road, a four-lane divided highway.

According to the Interchange Modification Report (IMR), large volumes of local traffic make a horseshoe movement traveling either east along VA 3 to I-95 north, then west along US 17 heading north towards Warrenton, or the traffic follows the reverse movement towards Spotsylvania County. The issues due to high traffic volumes on I-95 are compounded with heavy weaving and merging volumes within the study area, which decrease corridor efficiency and mobility, thus negatively impacting the Level of Service (LOS). The interchange ramps have movements that experience a LOS F – which indicates that the traffic conditions are at their worst – in the existing condition, with the highest volumes and substandard diverge, weave and/or merge conditions. High traffic volumes combined with heavy weaving and merging volumes between the VA 3 and US 17 interchanges causes a safety concern. All of the five roadway segments within the corridor are currently operating with a crash rate above the statewide average for that roadway type. The interchanges have the highest crash rates with the VA 3 and US 17 interchanges having crash rates of 379% and 239% greater than the statewide average. The purpose of the project is to improve the LOS on I-95 by providing additional capacity and improving mobility; and improve safety by reducing conflict points between local and through traffic.

Environmental Impacts

The environmental impacts for the Build Alternative (BA) that involves improvements along the existing corridor were described in the approved Environmental Assessment (EA). The EA was transmitted to numerous federal and state environmental resource agencies and was made available for public review prior to and at the Public Hearing. Substantive comments were addressed in the REA and FONSI request. No comments were received from the environmental resource agencies or any member of the public that suggested that the project would have a significant environmental impact.

The following is a summary of the project's environmental impacts.

Land Use

The BA is partially located within Stafford County, Spotsylvania County, and the City of Fredericksburg. The portion of the project located in Spotsylvania County is in the Primary Settlement District. The Primary Settlement District contains most of the commercial, office, and industrial uses located in Spotsylvania County, in addition to residential subdivisions. Within the City of Fredericksburg the project limits are located within two Land Use Planning Areas, Celebrate Virginia and Central Park. The existing land use for the Celebrate Virginia Planning Area is composed of predominantly commercial-zoned parcels, containing the Celebrate Virginia South development, along with one multi-family residential development, and minimal single-family residential development. The commercial portion of Celebrate Virginia includes hotels, a conference center, and numerous retail and service-oriented businesses. In addition, a 129-acre conservation easement exists to preserve Civil War resources and to screen development viewable from the Rappahannock River. The conservation easement would not be affected by the project. The Central Park Land Use Planning Area is a 310-acre retail and office space complex that is a major retail destination within western Fredericksburg. Scattered single family homes exist outside of the retail development. The proposed project would reduce congestion on I-95 and VA 3, which provides access to the Central Park Planning Area. Scattered single family homes exist outside of the retail development.

The Stafford County portion of the study corridor falls within the county's Urban Service Area, with some of the corridor designated as the Southern Gateway Urban Development Area (UDA), due to its proximity with US 17 and I-95. Existing land uses within this portion of the study corridor include commercial, residential, agricultural, and parks and open space. This project is consistent with each locality's current land use and zoning policies, including specific guidelines for future land use. The project is in the 2040 Fredericksburg Area Metropolitan Planning Organization (FAMPO) Long Range Transportation Plan (LRTP).

FHWA finds that the impacts to land use are not significant.

Social

Community Facilities/Services. There are five community facilities located within the study area. Right of way acquisitions and relocations are not anticipated for these facilities because the proposed project would be designed to avoid or minimize impacts to any existing and proposed community facilities as reasonably feasible. The Build Alternative would not have any divisive or disruptive effect on the community and would not hinder the accessibility of the public to any of the essential community or public services (schools, churches, shopping centers or medical facilities/hospitals) as well as police/fire and rescue emergency response services.

Neighborhood and Community Cohesion. The project would have any divisive or disruptive effect on neighborhood and community cohesion.

FHWA finds that the social impacts are not significant.

Environmental Justice

This project has been developed in accordance with Title VI of the Civil Rights Act of 1964 as amended, and Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations.

Public Participation. A Location Public Hearing was held for the project to share the findings of the EA, to receive comments and answer questions about those findings, and to receive recommendations for a decision. The public was notified of the public hearing via newspaper advertisements, the project website, and direct mailings to adjacent property owners. The public hearing was held on Wednesday, June 24, 2015 in an open-house format, with no formal presentation, from 5 p.m. to 7 p.m. at James Monroe High School. Attendees received an informational brochure describing the proposed project, the environmental study, the project purpose, and the environmental document findings and a comment sheet prepared to elicit input on any issues or concerns regarding the EA. At the hearing, citizens were invited to provide their comments for inclusion in the formal hearing record by submitting comments within ten days of the public hearing (by July 9, 2015), through various methods. Sign-in sheets show that approximately 63 citizens attended the hearing. A total of five comment sheets were submitted at the public hearing or during the comment period via mail. Additionally, five oral comments were recorded at the hearing, and 26 narrative comments (letters and emails) were collected by the close of the comment period. There were a total of 36 comment sheets and oral or written narrative comments.

Comments received from the public were generally in favor of the project with 13 in support of the project due to the need to alleviate congestion. While being in support of the project, some additional commenters felt that the project did not do enough to elevate traffic issues in the region and felt that more needed to be done to reduce traffic congestion including improvements on US Route 17 and VA Route 3. Additional comments were received regarding the need for a new crossing to the west of the

interstate and not as an expansion of the interstate. Substantive comments on the EA that were received from citizens as part of the formal hearing transcript are summarized in the FONSI request letter. No public comments specific to environmental related issues were received. No changes have been made to the proposed action or associated mitigation measures as a result of comments received on the EA.

Environmental Justice Impacts. Using current 2010 U.S. Census data, there are nine census block groups that fall within the study area. Of the nine, five census block groups are considered EJ populations based on minority percentages and two are considered EJ populations based on income. The two low income block groups also overlap with minority populations. While the No-Build Alternative would not impact socioeconomic and EJ populations, these populations would benefit from the proposed improvements of this project. The Build Alternative would require three residential relocations from census block group 010303-3. There are no impacts to community facilities that serve the EJ populations. The Build Alternative would not significantly impact community cohesion, accessibility, health and safety concerns and social changes in the study area. A dialog has been opened with the local family life center that provides services to residents of Fredericksburg and the surrounding communities which offers a variety of services to minority and low-income individuals and families and is located within the project study area. This dialog will continue through project development and construction.

The project is anticipated to positively affect regional economy and employment by decreasing congestion, increasing accessibility, and improving mobility and safety along I-95, VA 3 and US 17. Based on the analysis above, the project would not cause disproportionately high and adverse effects on minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23.

Limited English Proficiency. Executive Order 13166, “Improving Access to Services for Persons with Limited English Proficiency,” directs federal agencies to “examine the services they provide, identify any need for services to those with Limited English Proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them.” Data has been collected to determine the presence of persons with LEP and public involvement would be conducted to seek out and consider the needs of the LEP population as a part of this project. At the census tract level, percentage of persons that “Speak English Very Well” is part of the “Languages Spoken at Home” data set. The percentage ranges from 89% - 98% in the study area. While there don’t seem to be any outliers of non-English speaking populations within the study area, if any groups are discovered during the public involvement process, appropriate measures would be taken to make sure appropriate information is readily available for these persons.

FHWA finds that the Build Alternative would not have disproportionately high and adverse effects on minority and low income populations, and finds that the impacts would not be significant.

Historic Properties

Context. Pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations at 36 CFR 800, effects on historic properties has been taken into account during development of the project. VDOT reviewed previous studies and completed new surveys to identify historic properties within the Area of Potential Effects (APE) for the subject project. A total of 15 archaeological sites were identified within the archaeological APE. There are two historic properties within the project's APE:

- **Fredericksburg I Battlefield** (ABPP #VA028;VDHR #111-5295) -- The Virginia Department of Historic Resources (VDHR) has concurred with VDOT that the appropriate historic property boundary for the battlefield is the American Battlefield Protection Program's Potential National Register (PotNR) boundary, which extends into the project's APE.
- **Rappahannock Navigation System** (111-0134) – In 2000, the Keeper of the National Register determined that this property is eligible for the National Register of Historic Places under Criterion A, for its historical importance as a major transportation system of the Antebellum Period in Virginia, and Criterion C, for its engineering significance. The property is represented in the APE by two contributing elements:
 - Subsurface remains of Canal Lock #1/Minor's Lock (VDHR #111-0134-0001/44SP0074), and
 - Above-ground and subsurface remains of a section of the Rappahannock Canal (VDHR #111-0134-0002/44SP0064).

The VDHR concurred on September 1, 2015, that the project as proposed will have no adverse effect on historic properties provided that VDOT fulfills its commitments (as described in VDOT's letter of July 22, 2015, to VDHR) to (1) ensure that the design and construction of the new bridges across the Rappahannock River do not permanently or temporarily directly impact the remnants of the Canal Lock #1/Minor's Lock and Rappahannock Canal, and (2) allow VDHR and other consulting parties the opportunity to review and comment on project plans for the bridges in the area of the canal resources.

FHWA finds that the impacts to historic properties are not significant.

Section 4(f) Properties

Under regulations implementing Section 4(f) (23 CFR 774), the project will have a *de minimis* impact finding with respect to the project's Section 4(f) involvement with each of the resources noted above. The basis for these findings includes the following:

Historic Properties

- Rappahannock Navigation System (111-0134), represented by two contributing elements:
 - the Canal Lock #1/Minor's Lock (VDHR #111-0134-0001/44SP0074) and

- Rappahannock Canal (VDHR #111-0134-0002/44SP0064)
- Fredericksburg I Battlefield (VA028;111-5295)

The VDHR concurred on September 1, 2015, that the project as currently proposed will have no adverse effect on the properties listed above provided that VDOT fulfills its commitments (as described in VDOT's letter of July 22, 2015, to VDHR) to (1) ensure that the design and construction of the new bridges across the Rappahannock River do not permanently or temporarily directly impact the remnants of the Rappahannock Canal and the Canal Lock #1/Minor's Lock. and (2) allow VDHR and other consulting parties the opportunity to review and comment on project plans for the bridges in the area of the canal resources.

Recreational Lands

- City-Owned Recreational Lands
- Pool Pass Trail (Portions on County owned lands)
- Scout/Embry/Rappahannock Canal Trail
- Proposed Cannon Ridge-Ferry Farm Trail – Stafford County

The project as proposed will have a *de minimis* impact finding with respect to the project's involvement with the above listed recreational lands based on the following: 1) The project would not permanently interrupt the continuity of the trail or recreational lands; 2) Temporary suspensions of pedestrian and bicycle traffic on the trail would last no longer than necessary to complete the construction. Limitations of access would be coordinated throughout construction with the local governments; 3) The land disturbed by construction would be fully restored; and 4) The project would not impact existing recreational fields. The public was given the opportunity at the June 24th, Location Public Hearing to review and comment on the proposed project and the proposed *de minimis* impact finding. Following the opportunity for public comment, in letters dated July 15, 2015 and July 30, 2015, officials with jurisdiction over the recreational resources and trails (City of Fredericksburg and Stafford County) were also asked to concur that the project would not adversely affect the activities, features, and attributes, of the identified resources. Responses were received from both officials with jurisdiction concurring that the project would not adversely affect the activities, features, and attributes of the identified resources.

FHWA hereby makes a Section 4(f) *de minimis* impact finding for the properties mentioned above. FHWA finds that the impacts to Section 4(f) property are not significant.

Right of Way / Relocations

Based on the conceptual design, approximately 32.7 acres are anticipated for acquisition. Three residential properties and five commercial properties are anticipated to be potentially relocated or displaced as a result of the project. The actual quantity of right of way necessary to implement the project would be identified during final design.

The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources are available to all residential and business relocatees without discrimination.

FHWA finds that the right-of-way and relocation impacts are not significant.

Air Quality

To assess the potential effect of the project on air quality, a quantitative assessment of carbon monoxide (CO) concentrations was performed using computerized emissions and dispersion models. CO emissions were calculated using EPA's Motor Vehicle Emission Simulator (MOVES2010b) model. Additionally, the project is best characterized as higher potential Mobile Source Air Toxics (MSAT) effects; therefore a quantitative analysis was conducted in accordance with regulations and guidance from EPA and FHWA.

Based on the results of the air quality analysis, CO concentrations with the Build Alternative are predicted to be well below the NAAQS in both the Opening Year (2020) and Design Year (2040). Therefore, because projected CO levels are below the NAAQS under Build conditions, no exceedances are anticipated as a result of the proposed project and no mitigation measures are required. Additionally, the City of Fredericksburg, Stafford and Spotsylvania Counties have been designated as attainment for PM_{2.5}, and as a maintenance area for the 8-hour Ozone (1997) standard, for which conformity was revoked as of July 20, 2013; therefore the project is not subjected to transportation conformity requirements. In addition, at the project level, no analysis is required for PM_{2.5} as part of the air quality assessment since the project was not found to be a project of air quality concern.

The project has been determined to be a project characterized as having higher potential MSAT effects due to the project involving the creation of new or additional capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the average annual daily traffic (AADT) is projected to be in the range of 140,000 to 150,000 or greater by the design year. In addition, this project is also located in proximity to populated areas. Although the potential exists for localized increases in MSAT emissions, total MSAT emissions would be substantially lower in future years due to fleet turnover and the implementation of EPA's vehicle and fuel regulations. The temporary air quality impacts from construction are not expected to be significant. Construction activities are to be performed in accordance with VDOT's current *Road and Bridge Specifications*.

Finally, the project is not expected to cause or contribute to any violations of the NAAQS or to interfere with the attainment or maintenance of the applicable NAAQS.

Greenhouse Gases. Climate change is a critical national and global concern. Human activity is changing the earth's climate by causing the buildup of heat-trapping

greenhouse gas (GHG) emissions through the burning of fossil fuels and other human activities. Carbon dioxide (CO₂) is the largest component of human produced emissions; other prominent emissions include methane (CH₄), nitrous oxide (N₂O) and hydrofluorocarbons (HFCs). These emissions are different from criteria air pollutants since their effects in the atmosphere are global rather than localized, and also since they remain in the atmosphere for decades to centuries, depending on the species.

Greenhouse gas emissions have accumulated rapidly as the world has industrialized, with concentration of atmospheric CO₂ increasing from roughly 300 parts per million in 1900 to over 400 parts per million today. Over this timeframe, global average temperatures have increased by roughly 1.5 degrees Fahrenheit (1 degree Celsius), and the most rapid increases have occurred over the past 50 years. Scientists have warned that potentially dangerous shifts in climate and weather are possible without substantial reductions in greenhouse gas emissions. They commonly have cited 2 degrees Celsius (1 degree Celsius beyond warming that has already occurred) as the total amount of warming the earth can tolerate without serious and potentially irreversible climate effects. For warming to be limited to this level, atmospheric concentrations of CO₂ would need to stabilize at a maximum of 450 ppm, requiring annual global emissions to be reduced 40-70% below 2010 levels by 2050. State and national governments in many developed countries have set GHG emissions reduction targets of 80 percent below current levels by 2050, recognizing that post-industrial economies are primarily responsible for GHGs already in the atmosphere. As part of a 2014 bilateral agreement with China, the U.S. pledged to reduce GHG emissions 26-28 percent below 2005 levels by 2025; this emissions reduction pathway is intended to support economy-wide reductions of 80 percent or more by 2050.

GHG emissions are a regional concern and therefore should be addressed at the regional planning level. The project's purpose to reduce regional congestion is consistent with the regional goal to reduce GHG emissions.

FHWA finds that the air quality impacts are not significant.

Noise

The noise impacts are not significant in the context of the National Environmental Policy Act (NEPA).

Context. A preliminary traffic noise study was completed which evaluated potential traffic noise impacts and abatement measures associated with the project.

For the purposes of the preliminary noise analysis, the project study area was divided into 11 areas of common noise environments (CNEs). The CNEs contain 192 receptor locations, which are comprised of nine monitoring sites and 183 "modeling-only" sites. One hundred and sixty-six of the noise sensitive receptor sites in the project area are considered Category B (representing a total of 151 residences), seven noise sensitive land uses are considered Category C (representing three playgrounds, three basketball

courts, and one outdoor seating area), one noise sensitive land use is considered Category D (representing the interior of one nonprofit institution), and nine noise sensitive land uses are considered Category E (representing eight hotel and hotel outdoor activity areas).

CNE A is located west of I-95, north of VA 3, east of Carl D Silver Parkway, and south of Cowan Boulevard encompassing the eastern portion of the Central Park shopping center. CNE contains a hotel pool and an IHOP picnic area. CNE A also contains a permitted, but not yet built, Value Place Hotel, which does not have any planned outdoor use areas according to plans submitted by the City of Fredericksburg and is not considered to be a noise sensitive land use and therefore, was not modeled. Modeled Existing (2013) noise levels within CNE A were predicted to range from 53-65 dB(A). Design Year (2040) No-Build sound levels are predicted to range from 54-67 dB(A). The dominant noise source within CNE A is I-95. Design Year (2040) Build sound levels are predicted to range from 55-68 dB(A), with no noise impacts predicted.

CNE B is located along Briscoe Lane, west of I-95, north of Cowan Boulevard, and south of Fall Hill Avenue. CNE B contains seven residences. Existing (2013) worst-case noise levels within CNE B were predicted to range from 57-72 dB(A), Design Year (2040) No-Build sound levels are predicted to range from 60-74 dB(A). The dominant noise source for the receptors in CNE B is I-95.

CNE C is located east of I-95, south of Fall Hill Avenue, and north of Cowan Boulevard. CNE C contains forty-three residences, twelve outdoor seating areas, one courtyard, one playground, one volleyball court, and one basketball court. Modeled Existing (2013) worst-case noise levels within CNE C were found to range from 46-70 dB(A). Design Year (2040) No-Build sound levels are predicted to range from 48-73 dB(A). The dominant noise source within CNE C is I-95. CNE C contains five modeled receptors with Existing (2013) noise levels that are predicted to exceed the NAC.

CNE D is located west of I-95, north of Fall Hill Avenue, and just south of the rest area and contains hotels along Hospitality Lane. CNE D contains two pools, one patio at three hotels, and two picnic areas in the Virginia Welcome Center rest area. Modeled Existing (2013) worst-case noise levels within CNE D were found to range from 51-72 dB(A). Design Year (2040) No-Build sound levels are predicted to range from 53-75 dB(A). The dominant noise source within CNE D is I-95.

CNE E is located east of I-95 north of Fall Hill Avenue and contains the Bragg Hill Family Life Center. CNE E contains 85 residences, a community playground, and a community basketball court, as well as an exterior playground and outdoor seating area associated with the Bragg Hill Family Life Center. The interior location at the Family Life Center is categorized as a Category D receptor. Indoor noise levels at the facility were evaluated under Activity Category D in Table 1 (FHWA Noise Abatement Criteria). Site E50 was used to evaluate the interior noise levels at the facility. The existing (2013) condition noise level for the exterior for this site is predicted to be 65 dB(A). Since the exterior of the Family Life Center is composed of masonry material and modern air

conditioning is installed, the reduction in noise levels in the interior as a result of the building is predicted to be 25 dB(A) (FHWA “Highway Traffic Noise Analysis and Abatement Policy and Guidance,” December 2011). This results in indoor noise levels of 40 dB(A) for existing and 46 dB(A) for the build condition. Therefore the indoor noise level for the facility is not predicted to experience noise impact (Under Activity Category D indoor NAC) in the existing condition. Modeled Existing (2013) worst-case exterior noise levels within CNE E were found to range from 47-69 dB(A). Design Year (2040) No-Build exterior sound levels are predicted to range from 49-72 dB(A). The dominant noise source within CNE E is I-95.

CNE F is located west of I-95 along Riverside Parkway. CNE F contains three residences. Modeled Existing (2013) worst-case noise levels within CNE F were found to range from 61-70 dB(A). Design Year (2040) No-Build sound levels are predicted to range from 64-73 dB(A). The dominant noise source within CNE F is I-95.

CNE G is located east of I-95 and south of US 17 and is comprised of a hotel pool and residences along Short Street, Musselman Road, and Krieger Lane. CNE G contains 48 residences, one basketball court, and one hotel pool. Modeled Existing (2013) worst-case noise levels within CNE G were found to range from 45-74 dB(A). Design Year (2040) No-Build sound levels are predicted to range from 46-76 dB(A). The dominant noise source within CNE G is I-95.

CNE H is located east of I-95 and north of US 17 and is comprised of one hotel with an outdoor pool. For reference, there are no balconies present on the two-story hotel, only covered walkways to access each unit. Therefore, the VDOT balcony evaluation methods were not utilized for this area, since the walkways are not categorized as a viable outdoor use area. Modeled Existing (2013) worst-case noise levels within CNE H were found to be 60 dB(A). Design Year (2040) No-Build sound levels are predicted to be 62 dB(A). The dominant noise source within CNE H is I-95. Design Year (2040) Build sound levels are predicted to be 65 dB(A), with no noise impacts predicted.

CNE I is located west of I-95 and south of US 17 and is comprised of one hotel with an outdoor pool. For reference, there are no balconies present on the two-story hotel, only covered walkways to access each unit. Therefore, the VDOT balcony evaluation methods were not utilized for this area, since the walkways are not categorized as a viable outdoor use area. Modeled Existing (2013) worst-case noise levels within CNE I were found to be 63 dB(A). Design Year (2040) No-Build sound levels are predicted to be 65 dB(A). The dominant noise source within CNE I is I-95. Design Year (2040) Build sound levels are predicted to be 66 dB(A), with no noise impacts predicted.

CNE J is located west of I-95, north of US 17, and east of McLane Drive and is comprised of one hotel with an outdoor pool. For reference, there are no balconies present on the two-story hotel, only covered walkways to access each unit. Therefore, the VDOT balcony evaluation methods were not utilized for this area, since the walkways are not categorized as a viable outdoor use area. Modeled Existing (2013) worst-case noise levels within CNE J were found to be 59 dB(A). Design Year (2040) No-Build

sound levels are predicted to be 61 dB(A). The dominant noise source within CNE J is I-95. Design Year (2040) Build sound levels are predicted to be 61 dB(A), with no noise impacts predicted.

CNE K is located east of I-95 and north of US 17 and is comprised of residences along Limerick Lane, Pit Road, and Old Falls Road. Modeled Existing (2013) worst-case noise levels within CNE K were found to range from 62-70 dB(A). Design Year (2040) No-Build sound levels are predicted to range from 63-71 dB(A). The dominant noise source within CNE K is I-95.

Intensity. The noise analysis indicates that design year build noise levels are predicted to exceed the NAC at a total of 45 receptors within seven CNEs representing 59 residences, two playgrounds, one outdoor seating area, and one hotel patio.

CNE B

Design Year (2040) Build sound levels are predicted to range from 61-74 dB(A), with noise impacts predicted at two receptors representing four residences.

CNE C

Design Year (2040) Build sound levels are predicted to range from 49-75 dB(A), with noise impacts predicted at 10 receptors representing 13 residences and 2 outdoor seating areas.

CNE D

Design Year (2040) Build sound levels are predicted to range from 57-76 dB(A), with noise impacts predicted at three receptor representing one hotel patio and two picnic areas.

CNE E

Design Year (2040) Build exterior sound levels are predicted to range from 50-80 dB(A), with noise impacts predicted at 16 receptors representing 25 residences, one community playground, and a playground and outdoor seating area associated with the Bragg Hill Family Life Center.

CNE F

Design Year (2040) Build sound levels are predicted to range from 63-75 dB(A), with noise impacts predicted at one receptor representing two residences.

CNE G

Design Year (2040) Build sound levels are predicted to range from 49-82 dB(A), with noise impacts predicted at seven receptors representing ten residences.

CNE K

Design Year (2040) Build sound levels are predicted to range from 63-71 dB(A), with noise impacts predicted at five receptors representing five residences.

Design Year (2040) Build and No-Build noise levels are predicted to exceed the NAC in CNEs B, C, D, E, F, G and K; therefore, as per FHWA/VDOT procedures, noise abatement considerations are warranted.

Noise Mitigation

Two noise barriers (D and G1) were found to be not feasible based on projected noise reductions and insertion losses, while four noise barriers (B, F, G2, and K) were found to be feasible but not reasonable based on barrier cost. Two noise barriers (C and E), benefitting CNEs C and E, were determined to be feasible and reasonable. These CNEs include three of the community resources (Bragg Hill Family Life Center, Heritage Park I and Heritage Park II).

This information is based on a preliminary noise evaluation. A more detailed review will be completed during the final design stage. As such, noise barriers that are found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis. Similarly, noise barriers that were not considered feasible and reasonable may be found to meet established criteria and be recommended for construction. If a noise barrier is determined to be feasible and reasonable in final design, the affected residents and property owners will be given an opportunity to decide whether they are in favor of construction of the noise barrier.

FHWA finds that the noise impacts are not significant.

Water Quality & Aquatic Resources

A number of stream systems and other waterbodies, including reservoirs, in the lower Rappahannock River Basin have been listed as impaired by the Virginia Department of Environmental Quality (VDEQ). Impaired waters include a section of the Rappahannock River located approximately 1.5 miles from the study area, Falls Run within the study area, Claiborne Run 1.3 miles from the study area, and Hazel Run 0.7 miles from the study area. The project would require water quality permits, a stormwater management plan, and an erosion and sediment control plan. Adherence to the permit conditions and plans would minimize impacts to water quality. There are no public groundwater wells within a one-mile radius of the project site. Water flow from the project site drains into the Rappahannock River. There are no apparent impacts to public drinking water sources due to this project.

Based on the Federal Emergency Management Agency (FEMA) mapping, the Build Alternative crosses approximately 12.4 acres of the Rappahannock River 100-year floodplain and 0.99 acres of the Falls Run 100-year floodplain. During final design, a detailed hydraulic survey and study would evaluate specific effects on stormwater discharges and would adhere to applicable specifications ensuring that no substantial increases to the floodplain would occur. In accordance with Executive Order 11988,

Floodplain Management, floodplain encroachments would be avoided or minimized to the maximum extent practicable.

VA 618 (River Road) is a scenic byway and headwaters of the Rappahannock River are designated as a scenic river by the Virginia Department of Conservation and Recreation (VDCR) and the National Park Service (NPS). Any impacts to the scenic river through the project study area would be minimal, because the area is already disturbed by the existing I-95 bridges.

FHWA finds that the impacts to water quality and aquatic resources are not significant.

Wetlands and Waters of the U.S.

Waters of the U.S. are defined by US Army Corps of Engineers (Corps) and EPA regulations, and are described generically in EPA's 404(b)(1) Guidelines as rivers, streams, ponds, and special aquatic sites, (*e.g.*, sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes).

The Rappahannock River is the main watercourse through the project study area, flowing generally west to east. Additional primary systems include Hazel Run, Falls Run, and Fall Quarry Run. Perennial, intermittent, and ephemeral channels are located within the area. The wetland systems (which are predominantly forested and emergent systems) within the Build Alternative are located along the stream channels. As noted above, systems located within the Build Alternative footprint are non-tidal systems. There are no tidal waters located in the immediate vicinity of the project.

Based upon the assessment of wetland impacts, it has been determined, in accordance with Executive Order 11990, Protection of Wetlands, that there is no practicable alternative to the proposed construction in wetlands and that the proposed action would include all practicable measures to minimize harm to wetlands that may result from such use when they can be developed at the appropriate stage of project development. Approximately 10,754 linear feet of stream and 5.97 acres of wetlands lie within the study corridor with approximately 6,408 linear feet of stream and 2.4 acres of wetlands estimated to be impacted by the Build Alternative.

The preliminary impact estimate is based on the overlay of the Build Alternative's footprint, which consists of the proposed cut/fill boundaries. The required mitigation measures for stream and wetland impacts would be identified for the Build Alternative during final design. These measures would include avoidance and minimization efforts to the greatest extent practicable. Some measures which may be considered include: the use and appropriate placement of erosion and sediment control measures and best management practices, the use of upgraded erosion and sediment controls in environmentally sensitive areas, bridging/spanning of streams and wetlands, alignment shifts around specific systems, the use of cofferdams, steepening of slopes and the use of retaining walls on steeper slopes, properly countersunk culverts, stream relocation to improve skew angle and shorten culverts if new culverts are necessary, and ensuring

groundwater recharge/wetland hydrology maintenance through the location of outfalls and infiltration trenches. Following construction practices, any additional stormwater generated through new impervious surfaces would be treated through improved stormwater management systems.

Coordination with the Corps, VDEQ, and the Virginia Marine Resources Commission (VMRC) would be required during the permitting phase of the project to determine the jurisdictional limits of surface waters and to make a final determination of the need for and type of permits. Both temporary and permanent effects to jurisdictional wetland and stream systems would require a permitting decision from these agencies. It is anticipated that a Section 404 permit from the Corps, a Virginia Water Protection (VWP) General Permit from the VDEQ, and a Subaqueous Bottomlands Permit from the VMRC would be required. The project may qualify for a Corps State Programmatic General Permit (12-SPGP-01) based on the degree of impacts. For VDOT projects, VMRC issues the Virginia General Permit (VGP)-1 permit for subaqueous bottom encroachments where the drainage area of the impact zone(s) exceeds five square miles or for projects crossing state-owned bottomlands. The drainage area of the Rappahannock River is greater than five square miles at the project location. Wetland impacts are exempted by VMRC for any project where the state government is the permittee. The final determination of permit type would be completed through the permitting process once the project proceeds to the design and permitting phase.

Compensatory mitigation would likely be required for permanent impacts to stream and wetlands resulting from the construction activities. Compensatory mitigation is typically required in the same or adjacent hydrologic unit code (HUC) within the same watershed and physiographic province as the impact. As part of the permitting process, mitigation options would be investigated using the various agency resources. On April 10, 2008, new regulations providing guidance for compensatory mitigation was jointly issued by the Corps and the United States Environmental Protection Agency (EPA). In accordance with the existing regulations and standard permit conditions, temporary impacts would also be required to be restored to their original contours and re-vegetated with the same or similar species. Additional compensatory mitigation other than previously stated for temporary impacts is typically not required through the permitting process.

Avoidance and minimization measures during the permitting process will be developed in coordination with resource agencies during the final stages of design.

FHWA finds that the impacts to wetlands and waters of the U.S. are not significant.

Groundwater

The potential for non-point source pollutants to enter groundwater or surface water from storm water runoff would be managed by implementing an erosion and sediment control plan and a storm water management plan (including a pollution prevention plan) in accordance with VDOT's most current *Road and Bridge Specifications*. These specifications prohibit contractors from discharging any contaminants that could affect

water quality. In the event of accidental releases, the contractor will be required to immediately notify all appropriate local, state, and federal agencies and take immediate action to contain and remove contaminants in accordance with the approved pollution prevention plan.

Threatened and Endangered Species

Several federal and/or state listed threatened and endangered species were identified within a two-mile radius of the Build Alternative. A review of agency databases identified the Dwarf Wedgemussel (federal endangered/state endangered), Harperella (federal endangered/state endangered), Small Whorled Pogonia (federal threatened/state endangered), Northern Long-eared Bat (federal threatened), Green Floater (state threatened), and one bald eagle nest within two miles of the Build Alternative footprint. Based on the database results, critical habitat for the Dwarf Wedgemussel, Harperella, and Small Whorled Pogonia was not identified within study area. Additionally, the Green Floater and Bald Eagle nest were not identified within the footprint of the Build Alternative.

The project should have no effect on Harperella. Habitat surveys were conducted for the Dwarf Wedgemussel and the Small Whorled Pogonia to determine the potential for habitat within the project study area. It was determined that the section of the Rappahannock River located within the footprint for the Build Alternative contains suitable habitat areas for the Dwarf Wedgemussel and may potentially support populations of the species. A mussel survey will be completed prior to construction to determine if the species is present and to potentially relocate Dwarf Wedgemussel individuals should they be found to be within the limits of the project. During the permitting process, Time of Year Restrictions may be necessary for the Dwarf Wedgemussel, which would prohibit instream work between March 15th through May 31st, and August 15th through October 15th, of any year, as recommended in the Virginia Department of Game and Inland Fisheries. Additional agency coordination and re-evaluation concerning the Dwarf Wedgemussel will be conducted during the permitting process. For the Small Whorled Pogonia, suitable habitat was identified within the project study area north of the Virginia Welcome Center, but not within the anticipated footprint for the Build Alternative. Therefore, the project should have no effect on the Small Whorled Pogonia.

The Northern Long-eared Bat (NLEB) was listed as federally threatened on May 4, 2015, and was identified in database results within two miles of the study area. A habitat survey for the Northern Long-eared Bat has not been completed. Measures to ensure avoidance and minimization of impacts to this species are being developed; however, in the interim, VDOT has developed guidance that includes a time-of-year restriction for tree removal (greater than 3-inches diameter breast height), which must be performed outside the species roosting season (April 15th through September 15th). Additionally, any tree removal should be limited to trees located within 100 feet of the existing road surface. These measures would ensure that the project would not likely adversely affect

the NLEB. Additional agency coordination and re-evaluation concerning the NLEB will be conducted during the permitting process.

Based on FHWA's and VDOT's previous experience consulting with the USFWS for the above species, even if the project ends up with a Section 7 determination of "likely to adversely affect" a listed species and formal consultation is required, a "jeopardy" biological opinion for any of the species is highly unlikely. In addition, the formal consultation process requires the USFWS to issue a Biological Opinion that contains mandatory reasonable and prudent measures that the USFWS considers necessary or appropriate to minimize the impact. All reasonable and prudent measures in a Biological Opinion would be incorporated into the project in order to minimize any potential impacts to threatened and endangered species. Based on the above, the impacts to threatened and endangered species populations should not be significant. Notwithstanding, FHWA will not authorize the use of federal funds for construction of the project until the Virginia Department of Transportation documents the results of the Section 7 consultation in a reevaluation of the NEPA documentation for FHWA's consideration.

Hazardous Materials

The footprint of the Build Alternative was assessed for the presence of known hazardous material sites using both the Environmental Data Resources (EDR) database and various other databases associated with the EPA, including the Resource Conservation and Recovery Act Information (RCRAInfo) and the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). There are a total of 14 sites located within the vicinity of the project. Four of those sites are located within the project study area. These sites are: The Pep Boys, Star Enterprise, a Texaco storage tank location, and a Wawa. The Star Enterprise and Texaco sites have been closed and there have been no further violations documented for the past three years. The Wawa opened on January 17, 2014, and there have been no violations noted for this site. There have been no other violations noted. Of these four sites, Star Enterprise, the Texaco storage tanks' location, and the Wawa are within the potential impact area. Efforts would be made to avoid or minimize impacts to these sites.

Prior to construction, a Hazardous Materials Survey (following ASTM E1527-13 standards for Phase I Environmental Site Assessments) that covers the proposed project new right-of-way would be completed. In the event that recognized environmental conditions (RECs) are identified during the Hazardous Materials Survey and depending on the final alignment and/or drainage and utility improvements, Phase II Environmental Site Assessment activities may be necessary to identify and delineate impacted media that could adversely affect the project. VDOT will develop and implement procedures for their proper management through coordination with the regulatory agencies, and/or through the development of special provisions. No adverse impact is anticipated due to hazardous materials within the project area.

FHWA finds that the hazardous materials impacts are not significant.

Construction Impacts

During construction, temporary environmental impacts can occur but can be controlled, minimized or mitigated through careful attention to prudent construction practices and methods. Potential temporary construction impacts and preventive practices are summarized below.

Water Quality. Through implementation and monitoring of best management practices during and after construction, water quality impacts would be effectively avoided or minimized and mitigated. Specifically, the potential for non-point source pollutants to enter groundwater or surface water from storm water runoff would be managed by implementing an erosion and sediment control plan and a storm water management plan (including a pollution prevention plan) in accordance with VDOT's most current *Road and Bridge Specifications*. These specifications prohibit contractors from discharging any contaminants that could affect water quality. In the event of accidental releases, the contractor will be required to immediately notify all appropriate local, state, and federal agencies and take immediate action to contain and remove contaminants in accordance with the approved pollution prevention plan.

Air quality. Construction-related air quality impacts such as emissions from diesel-powered equipment, burning of debris, fugitive dust, and the use of cutback asphalt would be temporary. The proposed improvements would comply with all applicable local, state, and federal regulations (including the Virginia Environmental Regulation 9 VAC 5-40-5600 *et seq.* on fugitive dust emissions, and 9 VAC 5-40-5490 *et seq.* regarding cutback asphalt). Measures to control dust would include minimizing exposed earth by stabilization practices (including grass, mulch, pavement, and/or other types of cover) as early as possible following ground disturbance. Other stabilization practices would be implemented in accordance with VDOT's most current *Road and Bridge Specifications* manual.

Noise. Construction activity may cause intermittent fluctuations in noise levels. Temporary noise impacts would be attenuated through implementation of the VDOT-developed and FHWA approved noise limit specification for construction activities (as specified in VDOT's most recent *Road and Bridge Specifications*). The contractor will be required to conform to this specification to reduce the impact of construction noise on the surrounding community.

Solid Waste Disposal. Any solid waste impacts created during construction would be temporary. All solid waste material resulting from clearing and grubbing, demolition, or other construction operations would be removed from the project and disposed of in an appropriate manner.

Hazardous Materials. It is expected that no additional hazardous materials evaluations would be required. If contaminated materials are encountered during construction, VDOT will develop and implement appropriate procedures for their proper management and coordinate the removal, disposal, and/or treatment of the materials, as necessary. If

contaminated groundwater is encountered during construction, VDOT will implement appropriate specifications for proper management and treatment of the water, as necessary.

FHWA finds that the construction impacts would not be significant.

Indirect Impacts

Although the study area is highly urbanized, land use also includes a mix of forested lands and open space, including a number of wetlands areas associated with and including the Rappahannock River. The study area also includes the disturbed/mixed use lands surrounding the I-95, US 17, and VA 3 highway corridors. Future development plans for the properties within the project study area were researched and analyzed. As a result, several planned projects were identified, including development as a part of Celebrate Virginia North and Stafford County's Southern Gateway UDA. These planned projects are included in various transportation planning documents and would occur regardless of whether this I-95 roadway project is constructed. As previously described, adjacent to the redevelopment area is Celebrate Virginia, a 2,400 acre project being designed as a retail and tourism hub. It includes more than two million square feet of retail, a Corporate Campus offering up to three million square feet of office space, a golf club, and an adult living community. A section of this planned development is currently under construction in the northern portion of the development in the vicinity of Celebrate Virginia Parkway. Additional potential efforts include the Rappahannock Parkway, a potential limited access toll road and interchange from Interstate 95, to facilitate access to Celebrate Virginia in the City of Fredericksburg, which is included in FAMPO's 2040 Long Range Transportation Plan and would improve access to this development. Stafford County's Southern Gateway UDA encompasses the northern part of the study area. This UDA consists of approximately 864 acres and is a portion of the Southern Gateway Redevelopment Area, which is planned for a mix of uses following the concepts of a traditional neighborhood design with 3,674 dwelling units and 2,670,456 square feet of commercial buildings. Additional development beyond what is already planned by Stafford County is not expected to occur due to the project.

Indirect effects may be those resulting from the associated use of the roadway and increased impervious area, as well as maintenance and storm water runoff carrying particulates, metals, oil and grease, organics, nutrients and other substances. Indirect effects have the potential to affect aquatic life in the Rappahannock River and other stream systems. Land-disturbing activities may expose large areas of soil that could be eroded by wind and rain. Vegetation and naturally occurring soil stabilizers are sometimes removed, leading to an increase in sedimentation in surface water. Appropriate regulations would be followed to minimize these effects. The appropriate and applicable erosion and sediment control measures and Best Management Practices (BMPs) would be incorporated into the design and construction of the Build Alternative. For this reason, it is anticipated that indirect effects to surface and groundwater resources would not be significant for the Build Alternative. It is anticipated that the Build Alternative would impact Waters of the United States (WUS), including wetlands. Some

examples of potential indirect impacts to WUS, including wetlands, can include future runoff affecting water quality, either due to materials washing off the road surface or due to increased potential for sedimentation caused by concentration of runoff; disruption of hydrology that supports aquatic resources; and possibly decreasing their value to wildlife. However, due to the adherence to strict controls for design and construction of the project, the effects to water quality, either due to materials washing off the road surface or due to increased potential for sedimentation caused by concentration of runoff, is not anticipated to be significant.

Other reasonably foreseeable indirect effects would be to community resources and area populations. These effects are expected to be beneficial and would include improved mobility and access to community facilities, businesses, and neighborhoods.

FHWA finds that the indirect impacts from the project would not be significant.

Cumulative Impacts

Cumulative impacts are the impact on the environment resulting from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions. In determining cumulative effects, the past, present and future activities were reviewed in conjunction with potential project effects on notable features. There are a number of planned projects that are currently included in the assumptions for the No-Build Alternative, including the extension of the I-95 Express Lanes in the median of I-95 and the Fall Hill Avenue Bridge Replacement project, which will be widened to four lanes and provide room for the proposed I-95 northbound and southbound collector-distributor roads proposed with the Build Alternative. The No-Build Alternative is not expected to substantially alter development patterns within the study area; therefore, it is not anticipated to contribute to the cumulative impacts of any natural resources or historic properties evaluated as part of this study. The Build Alternative is expected to add incremental impacts to the overall cumulative effects of past and future actions to each of the resources considered; those impacts are expected to be both positive and negative.

The information provided below summarizes the environmental resources in the project study area that would be impacted by the Build Alternative, the impact that these resources have experienced from past and present actions, the incremental impact expected from the proposed project, identification of potential reasonably foreseeable future actions, and the potential impact that may occur from the reasonably foreseeable future actions in or near the study area.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Social	The project anticipates the displacement of three residential properties and five commercial properties. All displacements would be in accordance with Federal <i>Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970</i> .	The I-95 corridor in this area was constructed around the early 1960's. The interstate impacted agricultural fields and single family homes. Since the construction of the interstate, the region experienced both commercial and residential development along the interstate and at interchanges.	The I-95 corridor is identified as a corridor of statewide importance. The VTrans 2035 report identifies 50% to 85% increase in jobs and population in the area by 2035. The VTrans 2035 report identifies the need to explore value pricing and increase capacity through interchange improvements and modifications, interchange construction, and widening in strategic locations. Scheduled improvements within in the study corridor include interchange spot improvements and a safety improvement to add an auxiliary lane between exits 130 and 133. The FAMPO CLRP identifies HOT/HOV lanes extending through this area.	While additional improvements to the I-95 corridor would be additive, these impacts would not be occurring simultaneously and any additional impacts would be evaluated as roadway improvements are proposed.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Parks and recreational resources	Temporary impacts are proposed during construction activities.	Local governments have been working to expand recreational opportunities for residents.	Continuing efforts by local governments and others are expected to continue to enhance recreational opportunities in the region. One example is the proposed Cannon Ridge-Ferry Farm Trail.	No adverse cumulative effect.
Community resources	The project would not impact community cohesion, accessibility, health, and safety concerns. Temporary construction easements and possible right of way is required from local recreation facilities and a local family life center. Impacts to these resources will be minimized to the extent practicable.	The construction of I-95 corridor in the 1960's had minimal impact on community resources since most of the resources were developed after the construction of the interstate.	Scheduled roadway improvements within in the corridor study area include spot improvements at the interchanges and a safety improvement consisting of the addition of an auxiliary lane between exits 130 and 133. The FAMPO CLRP identifies HOT/HOV lanes extending through this area.	Negligible cumulative effects since the identified potential future actions are located within the existing right of way.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Economic	The project would provide temporary jobs during construction, improved transportation facilities, and improved travel times to better serves existing development. Approximately 5 commercial properties would be impacted by the proposed project.	The construction of I-95 was a catalyst for economic growth in the project area. Since the construction of I-95 the area changed from predominantly an agricultural community to commercial and light industrial development.	Scheduled roadway improvements within the corridor study area include spot improvements at the interchanges and a safety improvement consisting of the addition of an auxiliary lane between exits 130 and 133. The FAMPO CLRP identifies HOT/HOV lanes extending through this area. Commercial and light industrial developments are consistent with local zoning.	Improved transportation would support economic development and improve quality of life for residents, which is consistent with local and regional goals.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Wildlife and habitat	Conversion of approximately 37.9 acres of forest habitat to roadway. No impacts to prime farmlands or farmlands of statewide importance are proposed.	The construction of I-95 and the regional commercial development resulted in agricultural land being converted into roadways and developed lands. In a few locations agricultural land was converted to forested lands with many of the forested land areas that were present during the construction of the interstate still in existence today.	Conversion of additional wildlife habitat to residential, commercial, or other developed uses.	The loss of forested and wildlife habitat is cumulative. Expanding an existing interstate highway should not significantly contribute to impacts on wildlife and habitat.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Streams	Approximately 6,408 linear feet of stream are anticipated to be impacted by the project. Bridges and culverts would be used to reduce impacts with some requiring relocation due to proximity to the existing roadway. Unavoidable impacts to streams would be mitigated.	Past roadway improvements and commercial development have impacted an unknown quantity of streams in the study area.	Scheduled roadway improvements within in the corridor study area include spot improvements at the interchanges and a safety improvement consisting of the addition of an auxiliary lane between exits 130 and 133. The FAMPO CLRP identifies HOT/HOV lanes extending through this area. Commercial and light industrial developments will need to acquire the necessary permits to impact streams.	The construction of the project as well as commercial and residential developments within the study area would be localized and the reach of the cumulative impacts is not expected to be extensive. Finally, implementation of stream mitigation, both for the highway projects and development projects would offset the adverse impacts.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Wetlands	There are 5.97 acres of wetland within the study corridor with 2.4 acres anticipated to be impacted by the proposed project. Unavoidable impacts would be mitigated.	Past roadway projects and development activities have impacted an unknown quantity of wetlands in the study area.	Scheduled roadway improvements within in the corridor study area include spot improvements at the interchanges and a safety improvement consisting of the addition of an auxiliary lane between exits 130 and 133. The FAMPO CLRP identifies HOT/HOV lanes extending through this area. Commercial and light industrial developments will need to acquire the necessary permits to impact wetlands.	The construction of the project as well as commercial and residential developments within the study area would be localized and the reach of the cumulative impacts is not expected to be extensive. Finally, implementation of wetland mitigation, both for the highway projects and development projects would offset the adverse impacts.
Ecological processes	Impacts to headwater (ephemeral) streams may reduce nutrient and carbon inputs to downstream water and influence invertebrate biota populations and distributions.	The headwater stream impacts of past roadway improvements likely has impacted the connectivity of the headwater streams and receiving higher order streams which in turn may have affected invertebrate biota populations and distributions.	Additional development, consistent with the local zoning, could impact headwater streams and add to the impacts of past and present activities.	As with stream and wetland impacts described above, the impacts on ecological processes by I-95 and the impacts of other past, present, and reasonably foreseeable actions are disbursed over time and space. The adverse effects are reflected in the designation of some streams in the study area as impaired for benthic biota.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Water quality	Increased impervious surface may increase volume of stormwater runoff. Pollutant constituents of highway runoff may increase pollutant concentrations in waterways. Potential impacts would be offset by implementation of temporary and permanent stormwater management measures.	The water quality impacts of past roadway improvements and other development are reflected in the designation of Falls Run as impaired for aquatic life.	Scheduled roadway improvements within in the corridor study area include spot improvements at the interchanges and a safety improvement consisting of the addition of an auxiliary lane between exits 130 and 133. The FAMPO CLRP identifies HOT/HOV lanes extending through this area. Commercial and light industrial developments will need to acquire the necessary stormwater permits and follow the TMDL Implementation Plan to restore impaired waters.	Under the Clean Water Act, discharges of pollutants are much more highly regulated than in the past. State and federal certifications required for discharges to waters of the United States have greatly reduced the potential for substantial harm to water quality by pollutants that may be contained in such discharges. Stringent stormwater management requirements are imposed on any new construction project to minimize adverse water quality impacts.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Floodplains	Floodplains would be crossed in accordance with prevailing floodplain regulations and Executive Orders implemented for purposes of minimizing adverse consequences associated with floodplain encroachments. Accordingly, any floodplain impacts should not be significant.	Commercial and residential development since the construction of the interstate has increased impervious surfaces with most of the development outside of the Rappahannock River floodplain.	The reasonably foreseeable public or private activities could have minor floodplain impacts. However, these projects would also be subject to federal floodplain protections that would limit the potential impacts.	Negligible cumulative effect.

Environmental Resources or Issues in Study Area	Impact from Proposed Project	Impacts from Past and Present Actions	Potential Impact on Resources from Potential Future Actions	Cumulative Effect
Threatened and endangered species	Habitat for the Dwarf Wedgemussel and the Northern Long-eared bat was identified within the project footprint. If Dwarf Wedgemussel or the Northern Long-eared bat is identified within the project limits VDOT has previously committed to time-of-year restrictions to help ensure avoidance of an impact to these species.	The construction of the interstate and the development throughout the area has resulted in habitat loss for a number of species including the Dwarf Wedgemussel, Harperella, Small Whorled Pogonia, Northern long-eared Bat, Green Floater, and Bald Eagles.	Scheduled roadway improvements within in the corridor study area include spot improvements at the interchanges and a safety improvement consisting of the addition of an auxiliary lane between exits 130 and 133. Commercial and light industrial developments will need to coordinate impacts to threatened and endangered species. Any additional roadway improvements will be coordinated with applicable state and federal regulatory agencies. VDOT is committed to incorporating Time of Year Restrictions to minimize harm, when feasible.	While improvements along the I-95 corridor and regional development may be additive, these impacts would not all be occurring at the same time and roadway improvements will observe the identified time of year restrictions when species are located within the project limits.

All of these actions have had or will have an impact on the environment. For purposes of cumulative impact analysis for this EA, the primary issue is whether or not the proposed project would significantly impact the same resources as the actions listed above, resulting in a significant accumulation of impacts to the resource in question. Given that the impacts from the project on individual environmental resources are relatively minor, the effects from the Build Alternative would not significantly contribute to adverse cumulative impacts. It is recognized that the Corps may require an additional cumulative impacts analysis as part of their permitting responsibilities under Section 404 of the Clean Water Act.

FHWA finds that the cumulative impacts would not be significant.

Council on Environmental Quality's Regulations

The Council on Environmental Quality's regulations requires consideration of a project's context and intensity in determining whether the project will have a significant impact (40 C.F.R. 1508.27). Regarding context, the regulations state, "Context means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant." Since this project is a site-specific action, significance depends upon the effects of the project on the project area.

Regarding intensity, the regulations identify issues that should be considered in determining if the intensity of a project's impacts is substantial enough to warrant the preparation of an environmental impact statement (40 C.F.R. 1508.27(b)(1-10)). These issues are considered in the determination of whether there is a significant impact. The issues are addressed as follows:

1. Impacts that may be both beneficial and adverse – The project would result in some beneficial impacts on the human environment. Beneficial impacts include positively affecting the regional economy and employment by decreasing congestion, increasing accessibility, and improving mobility and safety within the I-95 corridor between the US 17 and VA 3 interchanges. We find that these beneficial impacts, when taken in conjunction with the adverse impacts, do not reach the level of significant requiring the preparation of an environmental impact statement.

2. The degree to which the project affects public health or safety – It is not anticipated that the project will adversely affect public health and safety. Since the project would enhance the capacity of the I-95 corridor between the US 17 and VA 3 interchanges, congestion would be reduced, while addressing safety issues and improving traffic operations. Also, the project will not cause or contribute to an exceedance of the National Ambient Air Quality Standards.

3. *Unique characteristics of the geographical area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical area* – No prime farmland, wild and scenic rivers, or ecologically critical areas would be impacted by the project. As discussed earlier, the impacts to wetlands are not significant. The VDHR concurred on September 1, 2015, that the project as currently proposed will have no adverse effect on historic properties provided that VDOT fulfills its commitments (as described in VDOT’s letter of July 22, 2015, to VDHR). Following the opportunity for public comment, officials with jurisdiction over the recreational resources and trails (City of Fredericksburg and Stafford County) were also asked to concur that the project would not adversely affect the activities, features, and attributes, of the identified resources. Responses were received from both officials with jurisdiction concurring that the project would not adversely affect the activities, features, and attributes of the identified resources.

4. *The degree to which the effects on the environment are expected to be highly controversial* – The term “controversial” refers to cases where substantial dispute exists as to the size, nature, or effect of the action rather than to the existence of opposition to a use, the effect of which is relatively undisputed. On this project, there has been no documented dispute regarding the size, nature, or effect of the project from the state or federal environmental resource agencies or any other entity. Further, no environmental resource agency has opposed the project. Based on the above, we find that the degree to which the effects on the environment are expected to be highly controversial does not require an environmental impact statement for this project.

5. *The degree to which the effects on the quality of human environment are highly uncertain or involve unique or unknown risks* – There are no known impacts on the quality of the human environment that can be considered highly uncertain or involve unique or unknown risks. The Build Alternative would require the acquisition of approximately 2.5 acres from residential properties and 20.1 acres from commercial properties. The Build Alternative may also require the relocation of three residential and five commercial properties. No community facilities, services or access would be adversely affected by the project. The project will not cause or contribute to an exceedance of the National Ambient Air Quality Standards.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration* – This action will not set a precedent for future actions with significant effects or represent a decision in principle about a future consideration. FHWA’s regulations at 23 CFR 771.115(a) list the types of actions that normally have a significant effect on the environment thereby requiring the preparation of an Environmental Impact Statement. The widening of an existing transportation facility is not on the list. The project has logical termini and independent utility and represents a reasonable expenditure; it does not force additional improvements to be made to the transportation system. This decision will not establish a precedent regarding the requirements of NEPA as they will be applied to future projects.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts* - This action has logical termini and independent utility and does not force additional transportation improvements to be made to the transportation system. Cumulative impacts were addressed in the EA and in this document, and we find that they are not significant.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss of significant scientific, cultural, or historic resources* – No districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places would be adversely affected by the project.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act* – The earlier discussion addresses the degree of potential effects to endangered and threatened species.

10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment* – The proposed action does not knowingly threaten a violation of any Federal, State, or local law for the protection of the environment. All applicable permits will be acquired prior to construction.

Conclusion

Based on the foregoing information and other supporting information, we find that the proposed project will not have a significant impact on the environment. Therefore, an environmental impact statement is not warranted, and the Finding of No Significant Impact is being issued accordingly. The Finding of No Significant Impact will be reevaluated as appropriate pursuant to 23 CFR 771.129(c) as major approvals are requested from FHWA.