

# **Environmental Studies for Prince William Parkway Interchange at Realigned Balls Ford Road Project**

From: Devlin Road To: Doane Drive; Prince William County  
State Project Number: 6234-076-266, UPC 112815  
FHWA 1994 Final SEIS Number: FHWA-VA-EIS-79-03-FS  
Submitted pursuant to 42 USC 4332(2)(c) and 23 CFR 771.130(c)

**July 8, 2019**

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Final SEIS Date: July 11, 1994

ROD Date: September 21, 1994

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## **1. INTRODUCTION**

Under the Virginia Department of Transportation's (VDOT's) Locally Administered Projects (LAP) program, the Prince William County Department of Transportation (PWC DOT) is developing a grade-separated diverging diamond interchange (DDI). The new interchange would be located just south of the existing at-grade intersection of the Prince William Parkway and Balls Ford Road. The project also would include the relocation and widening of Balls Ford Road between Devlin Road and Doane Drive and the grade-separation of relocated Balls Ford Road over the Norfolk Southern Railroad.

The proposed interchange of Prince William Parkway with a relocated Balls Ford Road was a component of the Route 234 Bypass (now Prince William Parkway) project, evaluated in a Supplemental Environmental Impact Statement (SEIS) prepared by VDOT and the Federal Highway Administration (FHWA) in 1994, in accordance with provisions of the National Environmental Policy Act (NEPA) and 23 CFR 771. As shown in **Figure 1**, the study limits for the Route 234 Bypass SEIS extended from the intersection of Route 234 and Route 619 at Independent Hill on the south end to the intersection of Route 234 and US Route 15 at Woolsey on the north end. The Modified Selected Alternative evaluated in the SEIS, however, did not include portions of the project north of I-66 that had been included in the 1981 Final Environmental Impact Statement (FEIS). Rather, the Modified Selected Alternative consisted of a four-lane divided highway on a combination of existing and new alignment from Independent Hill to I-66. The project featured six grade-separated interchanges, including the Balls Ford Road interchange; however, due to funding constraints, only two of the interchanges (at I-66 and Route 28) were built during construction of the Prince William Parkway in the late 1990s. The remaining four interchanges, including the Balls Ford Road interchange, were constructed as at-grade signalized intersections.

Since the 1990s, continuing population growth and expansion of employment centers in Prince William County have resulted in increased traffic volumes at the intersection of the Prince William Parkway and Balls Ford Road. Traffic volumes at the intersection are expected to continue to increase with further population growth and expansion of commercial/industrial development along the I-66 and Prince William Parkway corridors within Prince William County. The proposed Balls Ford Road interchange improvements would contribute to meeting the needs identified in the 1981 FEIS and the 1994 SEIS, namely to relieve existing and future traffic congestion within the Route 234 corridor.

As shown in Figure 1, the location of the proposed improvements is essentially the same as was proposed and evaluated in the 1994 SEIS. Modifications have been made, however, to the design of the Prince William Parkway/Balls Ford Road interchange and a portion of Balls Ford Road to improve traffic operations and coordinate with other planned transportation improvements in the vicinity of the interchange.

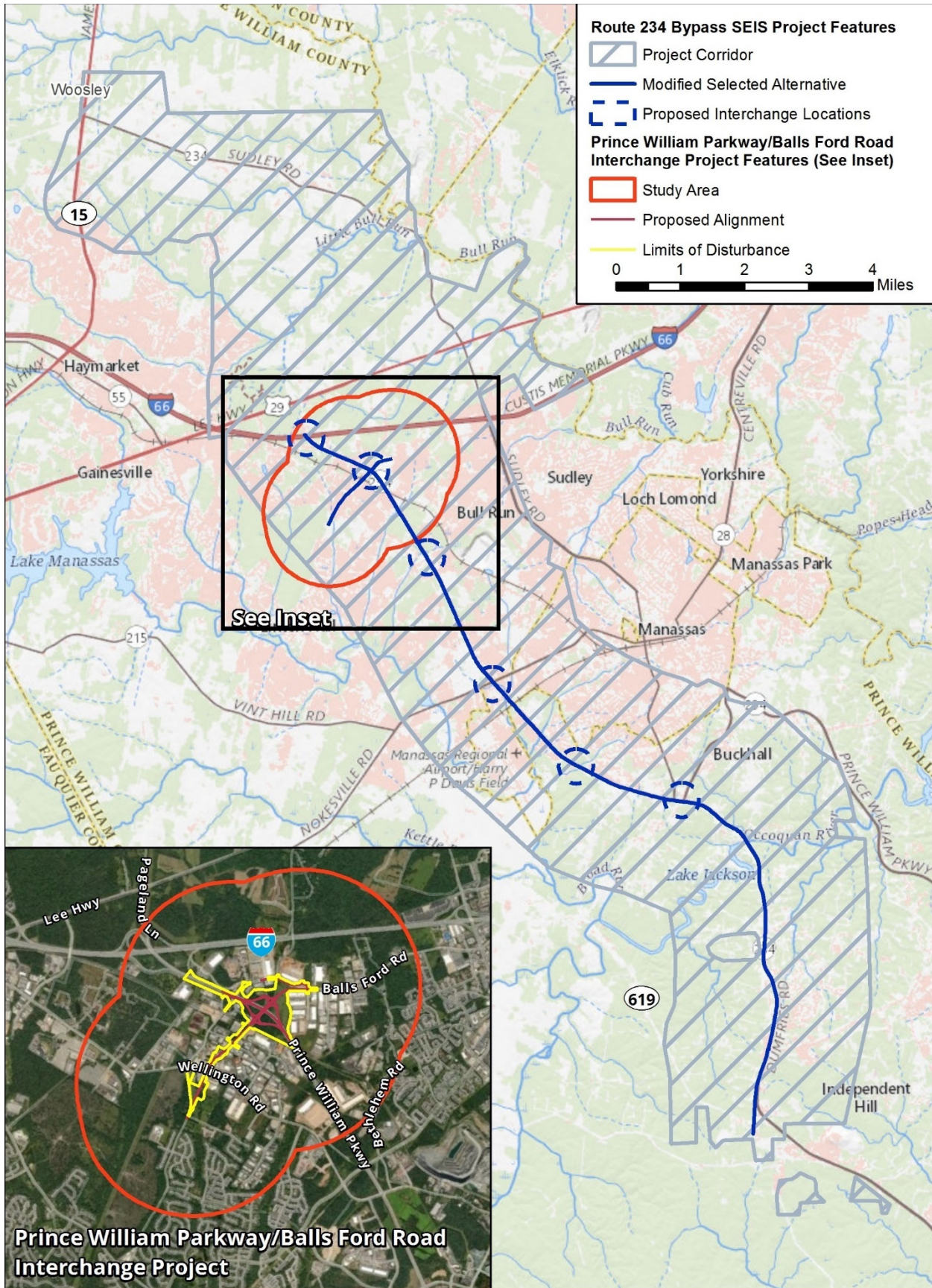


Figure 1. Route 234 Bypass SEIS Corridor and Prince William Parkway Interchange at Realigned Balls Ford Road Project Location

### Regulatory Context and Next Steps

The provisions of 23 CFR 771.130 address situations where changes are made to a proposed action that was evaluated in an Environmental Impact Statement. Specifically, 23 CFR 771.130(c) states, “Where the Administration [FHWA] is uncertain of the significance of the new impacts, the applicant will develop appropriate environmental studies or, if the Administration deems appropriate, an EA [Environmental Assessment] to assess the impacts of the changes, new information, or new circumstances. If, based upon the studies, the Administration determines that a supplemental EIS is not necessary, the Administration must so indicate in the project file.”

Environmental studies were conducted for the modifications to the Prince William Parkway/Balls Ford Road interchange to assess the environmental consequences resulting from changes in the design, changes in regulatory requirements and guidance, and changes in the affected environment since the SEIS was issued, to help determine if there are any new significant impacts at this point in project development. A public information meeting for the project was held on April 3, 2019 from 6:30 p.m. to 8:30 p.m. at Gainesville Middle School located at 8001 Limestone Drive in Gainesville, Virginia. The purpose of the meeting was to present information on the project since it was last presented to the public at the Design Public Hearing on September 30, 1993, present the findings of the environmental studies, provide a discussion forum between the public and project team, and obtain input and comments from the community. A draft of the Environmental Studies document was publicly available at the meeting and posted on the Prince William County website for a 15-day public comment period. No comments on the document were received by the close of the comment period. Prince William County, VDOT, and FHWA will assess whether at this point in project development any new significant environmental impacts have been identified that were not evaluated in previous NEPA documentation. If new significant environmental impacts are identified, then a Supplemental Environmental Impact Statement would be prepared. If no new significant environmental impacts are identified, then FHWA would document that determination. Under either scenario, environmental reevaluations will be prepared prior to authorizing the acquisition of right-of-way and authorizing construction for the interchange (see 23 CFR 771.129) to ensure the project design plans are consistent with the 1994 SEIS and this Environmental Studies document.

## **2. CHANGES IN THE AFFECTED ENVIRONMENT**

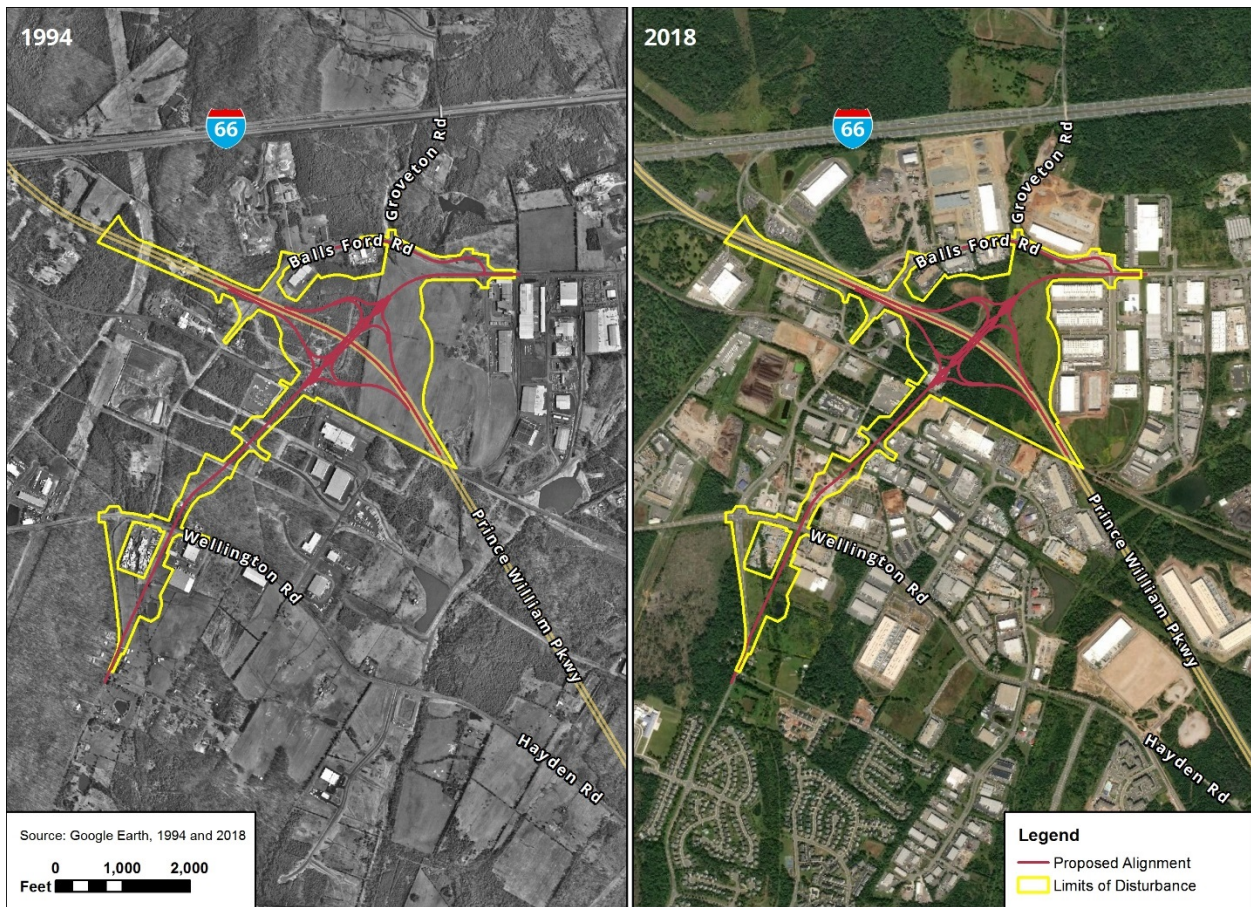
The most notable changes in environmental conditions within the vicinity of the intersection of Prince William Parkway and Balls Ford Road since the publication of the 1994 SEIS include population growth, expansion of industrial development, increased traffic congestion, and multiple planned or under-construction transportation improvements.

Over the course of 27 years, the population of Prince William County more than doubled from 215,686 in 1990 (as reported in the Route 234 Bypass SEIS) to 450,763 as estimated by the 2017 American Community Survey (ACS) 5-Year Estimates. The dramatic growth in the County’s population during this timeframe has been largely attributed to the availability of more affordable housing in Prince William County compared to other jurisdictions in Northern Virginia during a time of soaring housing prices within the Washington metropolitan area and to the decentralization of jobs within the region (Singer et al., 2009).

Population growth within Prince William County has increased demands on public services and infrastructure. The Prince William County Strategic Plan 2017-2020 identifies the need to increase tax revenues to fund quality of life improvements needed to accommodate a rapidly

growing population. Given political and regulatory limitations on raising residential tax revenues, the County is focused on expanding the commercial tax base by encouraging the establishment and growth of targeted industries (Prince William County, 2017), including life sciences and biotechnology, information technology, federal agencies and corporate facilities, and specialized logistics and supply chain (Prince William County Department of Economic Development, 2018).

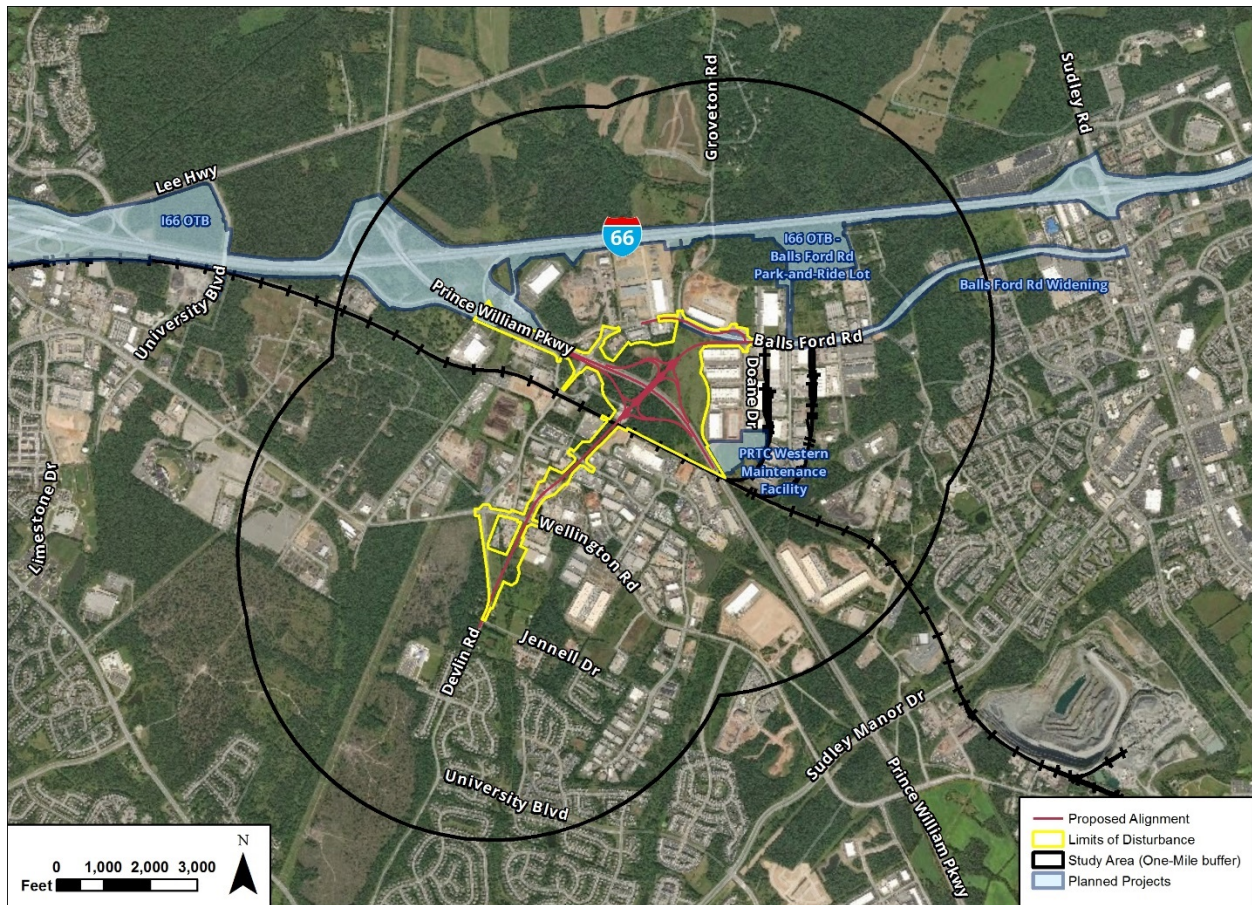
Attracting and expanding industries has been a focus of the Prince William County Strategic Plan from its inception in 1992 (Potomac Local, 2017; Prince William County, 2004, 2017). A comparison of a 1994 aerial photo of the project area with a 2018 aerial photo of the same area demonstrates the increase in industrial developments in the vicinity of the proposed interchange (Figure 2). Additional expansion of industrial and office uses is expected in the future within areas along the Prince William Parkway corridor between I-66 and Route 28, which are designated centers of industrial, regional, and other employment according to the Prince William County Long Range Land Use Plan (Prince William County, 2018).



**Figure 2. Comparison of Development in Project Area, 1994 (left) and 2018 (right)**

The population growth and increasing industrial and residential development within Prince William County has resulted in increased traffic congestion on local roadways and highways that connect the County to other parts of the Washington metropolitan area. The Prince William County 2017-2020 Strategic Plan emphasizes the importance of providing an open local road network with access to goods and services to support commercial enterprises. The Strategic Plan also identifies the need to increase the availability and use of mass transit, car/van pool, and other alternatives to single occupancy vehicle commuting in order to improve local and regional road networks and reduce commute times for residents.

Multiple transportation improvement projects are planned or under construction within the vicinity of the Prince William Parkway and Balls Ford Road intersection. **Figure 3** shows the location of these future transportation improvements. The Transform 66 Outside the Beltway (OTB) Project, a public-private partnership between VDOT, the Virginia Department of Rail and Public Transportation (DRPT), and private partner I-66 Express Mobility Partners, commenced construction in late 2017 and will include the construction of 22.5 miles of new Express Lanes alongside general purpose lanes on I-66 from I-495 to University Boulevard in Gainesville; new and improved bus service and transit routes; new and expanded park and ride lots providing convenient access to the Express Lanes; interchange improvements, including auxiliary lanes between interchanges; and 11 miles of new bike and pedestrian trails. The project includes a new commuter parking lot at the intersection of Balls Ford Road and Century Park Drive, which is a new road to be constructed to connect Balls Ford Road and the I-66 Express Lanes.



**Figure 3. Future Transportation Improvements in the Project Vicinity**

Separate from the proposed improvements to Balls Ford Road as part of this Prince William Parkway Interchange at Realigned Balls Ford Road Project, Prince William County proposes to widen Balls Ford Road from two to four lanes from Groveton Road to VA Route 234 Business (Sudley Road) to improve access from the eastern end of Balls Ford Road to the new Balls Ford Road Park and Ride facility, the I-66 Express Lanes, and the existing Gainesville Commuter Lot on Cushing Road<sup>1</sup>. The project will include a 10-foot-wide shared use path and 5-foot-wide sidewalk to complement bicycle and pedestrian improvements along the I-66 corridor.

Another transportation improvement project planned along Balls Ford Road is the Potomac Rappahannock Transportation Commission’s (PRTC) Western Bus Maintenance and Storage

<sup>1</sup> <http://www.pwcgov.org/news/pages/Major-Commuter-Changes-Coming-to-Western-Prince-William.aspx>

Facility. The facility is needed to meet the long-term transit needs of Prince William County and the cities of Manassas and Manassas Park and to accommodate the buses that will be used to provide additional bus service on I-66.

### **3. PROPOSED DESIGN**

The location of the proposed Balls Ford Road interchange and the alignment of the relocated Balls Ford Road are consistent with the location and alignment of the proposed facilities as presented in the SEIS (see Figure 1). The location of the proposed interchange, south of the existing intersection of Prince William Parkway and Balls Ford Road, would improve operations for vehicles traveling along Prince William Parkway to and from I-66 and points along Balls Ford Road. A grade-separated crossing would be provided at the intersection of the relocated Balls Ford Road and Norfolk Southern Railroad to improve traffic operations and safety for all users by eliminating the roadway/railroad conflict point.

The following are changes to the proposed design from the SEIS:

- Construction of a diverging diamond interchange rather than a clover leaf interchange. The diverging diamond is more compact and less costly.
- Addition of a 10-foot-wide shared use path and 5-foot-wide sidewalk along the relocated Balls Ford Road. These facilities would tie into similar facilities included in the Balls Ford Road Widening Project.

### **4. ENVIRONMENTAL CONSEQUENCES**

Environmental studies were conducted to determine whether the current design, under current environmental conditions, would result in new or significant environmental effects compared to those presented in the SEIS. These studies took into account new regulatory requirements and guidelines that have been issued since publication of the SEIS.

**Figure 4** shows the current interchange design and environmental resources based on currently available geographic information systems (GIS) data and field reconnaissance. **Table 1** summarizes the environmental studies conducted and documents the changes that have occurred in the project and its impacts within the current regulatory context. **Table 2** quantifies and compares impacts reported in the vicinity of the Balls Ford Road interchange as presented in the SEIS with updated values for the current interchange design. A list of anticipated regulatory permits and authorizations for the project is provided in **Table 3**.

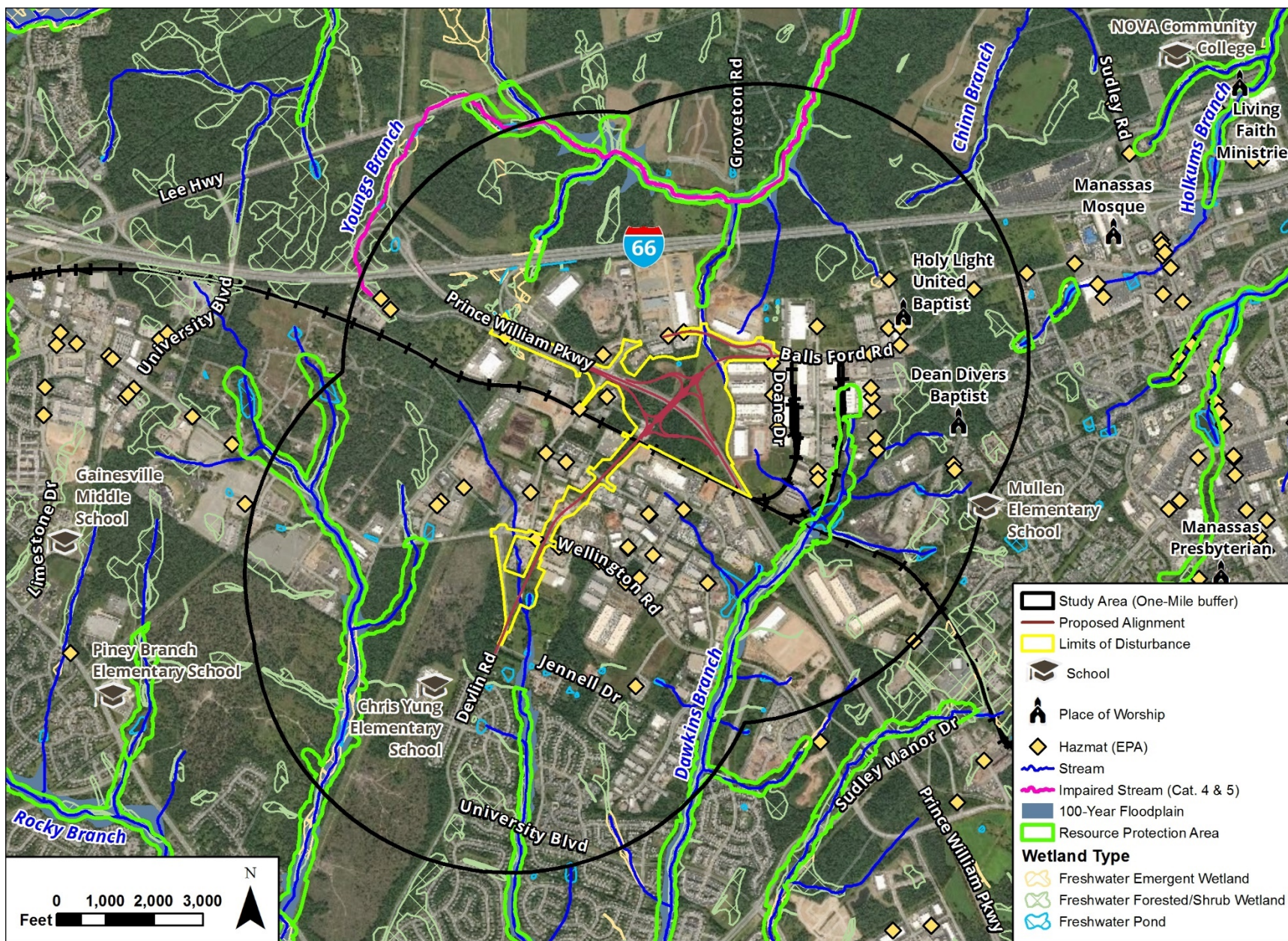


Figure 4. Environmental Resources within One Mile of the Project Area



**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
<b>TRANSPORTATION</b>			
Traffic and Transportation	Traffic forecast updated from 2015 design year to 2040 design year. Review of SEIS; Interchange Justification Report (IJR) Lite for Prince William Parkway (Route 234 Bypass) and Relocated Balls Ford Road (Route 621); ongoing projects and studies in surrounding area; and Prince William County Comprehensive Plan.	Change in forecasted volumes due to extension of design year to 2040.	<p>Implementation of the Route 234 Bypass was designed to reduce traffic congestion and travel times on existing Route 234, especially through downtown Manassas. Additionally, the new bypass would provide an improved connection to I-66 and improved access to developing industrial, commercial, and residential areas. Population increases projected for Prince William County were cited in the SEIS to result in average daily traffic volumes to grow along all sections of existing Route 234 by the design year 2015.</p> <p>Updated traffic studies completed as part of the IJR Lite cite similar statistics, and based on the Metropolitan Washington Council of Governments (MWCOC) model projections, Prince William County will have a 61 percent population growth and 113 percent employment growth by the year 2040. This segment of Prince William Parkway between Balls Ford Road and I-66 carries an existing (2018) average daily traffic volume of approximately 49,000 vehicles per day (vpd). Balls Ford Road currently carries an average of 18,000 vpd.</p> <p>As documented in the IJR Lite, the proposed interchange and Balls Ford Road improvements would alleviate existing recurring congestion in both the AM and PM peak periods. Relocating the intersection farther from I-66 would improve operations for vehicles traveling along the Parkway to/from I-66 and points along Balls Ford Road. In the No-Build condition, there are queues in the northbound and southbound directions along Prince William Parkway. The southbound queue in both peaks spills back onto the I-66 mainline, and the northbound queue extends to the Sudley Manor Drive intersection and additional upstream intersections. The proposed DDI removes the impedence of the signal on Prince William Parkway, allowing for free flow conditions. As a result, travel times improve and congestion is reduced in both the AM and PM peaks. The queues dissipate along Prince William Parkway and no longer impact the I-66 mainline. In the Build condition, the realigned Balls Ford Road also results in less congestion on the arterial and collector roadway network.</p>
<b>SOCIOECONOMICS AND LAND USE</b>			
Land Use Conversion	Review of SEIS, Prince William County Comprehensive Plan, historic and current aerial photography, field review, and analysis of design changes.	Minor change.	Designated land uses surrounding the interchange have changed little since publication of the SEIS. The Balls Ford Road interchange area was identified as "Heavy Industrial and Light Industrial/Flex" in the SEIS based on the 1990 Prince William County Comprehensive Plan. The majority of lands surrounding the currently proposed interchange location and Balls Ford Road improvements are identified as "Industrial Employment" in the current Prince William County Comprehensive Plan. The west end of the proposed relocated Balls Ford Road is within an area designated as "Flexible Employment Center". Small pockets of "Public Land" are also within the area of the proposed interchange and Balls Ford Road improvements. Such public lands are owned by the County or State; are not currently open to the public; and were planned to accommodate the proposed interchange and Balls Ford Road relocation.
Development	Review of historic and	No change.	Existing development surrounding the proposed interchange consists of industrial and office

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	current aerial photography and field review.		uses, as it did at the time of the SEIS; however, the density of development surrounding the interchange has increased substantially (see Figure 2). Relocating the interchange southward will avoid impacting developments that have since been established at the intersection of Prince William Parkway and Balls Ford Road.
Consistency with Area's Comprehensive Plan	Comprehensive plan review.	No change.	The project remains consistent with the Prince William County Comprehensive Plan, which includes the proposed interchange and recommends a right-of-way consistent with an Urban Major Arterial for Balls Ford Road from Sudley Road (Route 234 Business) to Wellington Road.
Populations	Review of SEIS and 2017 ACS data.	No change.	While there has been population growth within the Prince William Parkway corridor and surrounding communities, effects of the proposed interchange and roadway improvements on populations are consistent with the SEIS. Land uses surrounding the proposed interchange remain largely industrial and commercial. Residential properties at the west end of the proposed improvements, where the relocated Balls Ford Road connects with Devlin Road, were present at the time of the SEIS.
Emergency Services	Review of SEIS and field review.	No change.	The SEIS predicted improvements to response time of emergency vehicles as a result of the Route 234 Bypass project. Similarly, the proposed interchange and roadway improvements would improve the response time of emergency vehicles by reducing congestion and delay at the current intersection of Prince William Parkway and Balls Ford Road.
Community Facilities	Review of SEIS and field review.	Minor change.	A new school has been constructed in the project vicinity since the publication of the SEIS. Chris Yung Elementary School was constructed in 2015 at 12612 Fog Light Way, approximately 0.5 mile southwest of where the proposed relocated Balls Ford Road would tie into Devlin Road. No direct or indirect impacts to the school are expected.
Potential Residential Relocations	Review of SEIS, and historic and current aerial photography. Field review.	No change.	The SEIS reported 42 residential relocations for the entire Route 234 Bypass project; however, based on review of historical (1994) aerial photography, no residential relocations would have occurred in the vicinity of the Balls Ford Road interchange. No residential relocations are expected with the current proposed interchange design and roadway improvements.
Environmental Justice Populations	Review of SEIS and 2017 ACS data. Field review.	No change.	<p>The SEIS was published within less than six months of the issuance of Executive Order 12898 – <i>Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations</i>, and prior to the establishment of environmental justice strategies by individual federal agencies. The SEIS provided information on minority populations and average income at the County level and concluded that the project would not impact particular social groups.</p> <p>An analysis of impacts to minority and low-income populations has been conducted consistent with policies and guidance contained in the Department of Transportation's Environmental Justice Order 5610.2(a) (published April 15, 1997, updated May 2, 2012) and FHWA's Environmental Justice Order 6640.23A (published December 2, 1998, updated June 14, 2012). Based on review of 2017 ACS data, Census tract block groups that include residential communities within the eastern edge of the study area contain minority population</p>

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			<p>percentages (57.20%, 69.63%, and 79.41% minorities) greater than that of the study area as a whole (56.48% minorities) and than that of Prince William County (55.38% minorities). Based on US Department of Health and Human Services poverty guidelines criteria and 2017 ACS median household income data, no low-income populations have been identified within the Census tract block groups traversed by the study area. No adverse community impacts are anticipated to minority populations within the study area. The benefits of reduced congestion and delay will be shared by all users of Prince William Parkway and Balls Ford Road, regardless of race, ethnicity, or economic background.</p>
Business Relocations	Review of SEIS, historic and current aerial photography, and Prince William County parcel maps. Field review.	Minor change.	<p>The SEIS identified eight commercial establishments affected by property acquisition for the entire Route 234 Bypass project. Based on review of historical (1994) aerial photography, it appears that one or two commercial properties may have been impacted by an interchange at the crossing of Route 234 Bypass and Balls Ford Road.</p> <p>One commercial structure is within the limits of disturbance (LOD) of the current interchange and roadway design. Any right-of-way acquired for the roadway would be purchased in accordance with established procedures and requirements of the federal <i>Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970</i>, as amended. Assurance is given that relocation resources will be available to all displacees without discrimination.</p>
Visual and Aesthetics	Review of SEIS, and historic and current aerial photography. Field review.	Minor change.	<p>The SEIS identified visual impacts for the Route 234 Bypass project from grading and clearing of vegetation where the proposed roadway would cross lands in rural use or natural vegetation, and in areas of steep slopes and visually prominent landforms. The visual character of the segment of the Route 234 Bypass that includes the Balls Ford Road interchange was described as “primarily industrial.”</p> <p>The current visual character of the proposed interchange and relocated Balls Ford Road remains industrial, with fewer areas of open space and natural vegetation than at the time of the publication of the SEIS (see Figure 2).</p>
Farmlands	Review of SEIS, and historic and current aerial photography.	No change.	<p>The SEIS identified impacts to approximately 413 acres of underlying prime farmland soils. The Farmland Conversion Impact Rating score sheet (USDA Form AD-1006) prepared for the SEIS identified a total score of less than 160, which is below the threshold for further consideration for protection of farmlands in accordance with 7 CFR 658.4(c)(2).</p> <p>There is no prime or unique farmland within the Prince William Parkway Interchange at Realigned Balls Ford Road project area. Per Farmland Protection Policy Act (FPPA) Rule 7 CFR 658.2, farmland does not include “land already in or committed to urban development.” Farmland already in urban development includes areas identified as “urbanized area” (UA) on Census Bureau Maps. The project area is included in the Washington DC-VA-MD 92242 Urbanized Area per the 2010 Census Urbanized Area Reference Map (<a href="https://www2.census.gov/geo/maps/dc10map/UJUC_RefMap/ua/ua92242_washington_dc--va--md/DC10UA92242.pdf">https://www2.census.gov/geo/maps/dc10map/UJUC_RefMap/ua/ua92242_washington_dc--va--md/DC10UA92242.pdf</a>).</p>

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<b>NOISE</b>			
Noise Criteria	Review of SEIS findings and FHWA's Noise Abatement Criteria.	No substantial change.	FHWA issued new noise regulations effective July 13, 2011 ( <i>Procedures for Abatement of Highway Traffic Noise and Construction Noise</i> , 23 CFR 772). The new regulations provided clarification on applicability, certain analysis requirements, and the use of federal funds for noise abatement measures. In addition, two new activity categories were added to the noise abatement criteria (NAC), and the activity descriptions were expanded to better describe the types of land use facilities that would fall into each category. The numerical values of the criteria, however, have not changed. For example, the NAC for Activity Category B (residential) is still 67 dB(A).
Noise Impacts	Review of SEIS, and historic and current aerial photography. Field review.	Minor change.	<p>The SEIS noise evaluation identified thirty-three representative sites that reflected worst-case noise conditions along the entire Route 234 project corridor. These included residential receptors at two sites (sites 7 and 8) along the relocated Balls Ford Road. Site 7 included homes on both sides of the relocated Balls Ford Road, near the tie in with existing Devlin Road. Site 8 was east of Balls Ford Road, just north of Wellington Road. Predicted noise levels for the Build Condition at these sites (<b>60 and 61 dB(A)</b>, respectively) did not exceed the FHWA NAC for a residential receptor and did not represent a substantial increase in noise from existing conditions.</p> <p>Residential noise receptors are still present at Site 7 (along Devlin Road at the west end of the project in the area where proposed relocated Balls Ford Road would join Devlin Road) from the <i>Noise Study</i> prepared for the SEIS. The reported design year (2015) build condition noise level in the <i>Noise Study</i> was 60 dBA, which was well below the 66 dBA threshold at which a noise impact would be considered to occur. The detailed traffic data used to reach this result in the noise model is not available; however, a qualitative comparison of the predicted noise level from the <i>Noise Analysis</i> and the likely magnitude of the noise level for the current project's design year (2040) can be extrapolated from a comparison of available daily traffic volumes data. Traffic data in the SEIS indicates that the traffic volume forecasted on Route 234 for the year 2015 would be 50,500 vehicles per day. The year 2040 forecast for the current project indicates a daily volume on Route 234 of 55,075, roughly a nine percent increase. Assuming a similar relationship between the forecasted volumes on relocated Balls Ford Road/Devlin Road, the increase in volume would not result in a noise impact at Site 7. <i>FHWA's Highway Traffic Noise: Analysis and Abatement Guidance</i> notes that a doubling of the noise source (i.e., the traffic volume) would produce only a 3 dBA increase in noise level and that studies have shown that a 3 dBA increase would be barely perceptible to the human ear. Using this relationship, the traffic volume on relocated Balls Ford Road/Devlin Road would have to be four times greater than that used in the SEIS noise analysis in order to reach a level of 66 dBA.</p> <p>Site 8 (on Wellington Road near the proposed crossing by relocated Balls Ford Road) is no longer extant as the property is now in commercial use, which is less sensitive to noise and</p>

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			has a higher noise abatement criterion. Except for residences in the Devlin Road area at the west end of the project, all land uses in and around the interchange area are commercial (NAC activity category E) or industrial ((NAC category F). Based on the above, no new noise impacts have been identified.
<b>AIR QUALITY</b>			
Air Quality	Review of SEIS and current VDOT and FHWA guidance/regulations.	No change.	<p><b>Carbon Monoxide (CO):</b> CO hotspot analysis was completed as part of the SEIS at four worst-case locations along the alignment (which did not include the Balls Ford Road intersection). VACAL3M4, a simplified microcomputer procedure developed from FHWA 's MOBILE3/CALINE3 Graphic Assessment Program (revised to include Mobile 4.1 emission factors), was used to estimate CO concentrations at all four locations, which were all below the National Ambient Air Quality Standards (NAAQS).</p> <p>VDOT's April 2016 <i>Project-Level Air Quality Analysis Resource Document</i> provides the following guidance regarding updates to previously completed air quality analyses:</p> <p>"For project-level air quality analyses previously completed, updates or revisions to the modeling, analysis and/or documentation are not typically conducted unless both:</p> <ol style="list-style-type: none"> <li>1. the overall NEPA document is being re-evaluated or supplemented for air quality reasons, in which case the US DOT (in consultation with Department air quality staff as appropriate) may request an update, <b>and</b></li> <li>2. a review by Department air quality staff (in consultation with FHWA, as appropriate) concludes that a new or revised analysis is warranted as changes in the models, methods and/or assumptions from the original analysis would be considered substantive by the definition provided in this document." <p>Section 1.3 defines the term "substantive change" as follows (emphasis added):</p> <p>"For project-level air quality analyses conducted to meet conformity requirements and/or for purposes of NEPA, a substantive change is defined here as one that would significantly affect the modeling results and/or the analysis to the degree that <i>it would change a finding, determination or conclusion that all applicable requirements for the air quality analysis for the project would be met and the project cleared.</i> For analyses involving project-specific dispersion modeling for any pollutant(s) for conformity purposes, this includes whether the project would pass the applicable conformity test(s)."</p> <p>As described in the Traffic and Transportation section above, the proposed DDI and improvements to Balls Ford Road are expected to alleviate recurring congestion during the peak periods, reduce queues and intersection delays, and improve operations on the arterial and collector roadway network. These conditions can be expected to reduce air pollutant emissions compared to the current intersection and in conjunction with more stringent</p> </li></ol>

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			<p>emissions standards today (see MSAT discussion below), the proposed project would have similar or better air quality effects when compared to the clover leaf interchange included in the SEIS. There are no sensitive receptors in the vicinity of the new interchange location. Accordingly, there would not be a substantive change in the air quality findings since completion of the original analysis that would require a new analysis.</p> <p><b>Particulate Matter (PM):</b> The Washington, D.C. metropolitan area was designated maintenance-moderate status for the 1997 PM<sub>2.5</sub> NAAQS subsequent to the completion of the SEIS. In August 2016, this standard was revoked and replaced with a more stringent 2012 standard. The area is in attainment for the 2012 PM<sub>2.5</sub> standard and therefore is not subject to a PM conformity assessment.</p> <p><b>Mobile Source Air Toxics (MSAT):</b> The Clean Air Act Amendments (CAAA) of 1990 identifies 188 air toxics, also known as hazardous air pollutants. Subsequent to the completion of the SEIS, the Environmental Protection Agency (EPA) assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are part of EPA's Integrated Risk Information System (IRIS). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the 2011 National Air Toxics Assessment (NATA). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics (MSAT), the list is subject to change and may be adjusted in consideration of future EPA rules.</p> <p>FHWA developed a tiered approach with three categories for analyzing MSAT in NEPA documents, depending on specific project circumstances:</p> <ol style="list-style-type: none"> <li>1) No analysis for projects with no potential for meaningful MSAT effects;</li> <li>2) Qualitative analysis for projects with low potential MSAT effects; or</li> <li>3) Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.</li> </ol> <p>This project would be described as one with low potential MSAT effects, based on the definition below (as it proposes a new interchange with design year traffic projected to be less than 140,000 AADT):</p> <p>Those that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. This category covers a broad range of projects, including minor widening projects; new interchanges; replacing a signalized intersection on a surface street; and projects where design year traffic is projected to be less than 140,000 to 150,000 annual</p>

**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

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			<p>average daily traffic (AADT).</p> <p>Guidance on MSAT analysis is provided in FHWA's <i>Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents</i> dated October 18, 2016 . This Updated Interim Guidance incorporates new analysis conducted using MOVES2014a, the latest major update of the Motor Vehicle Emissions Simulator (MOVES) vehicle emissions model. As indicated in the guidance, EPA's regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES2014 model forecasts a combined reduction of over 90 percent in the total annual emissions rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45 percent.</p> <p><b>Regional Conformity Status of the Project:</b> Because the project is located in an eight-hour ozone nonattainment area, conformity applies and the project must be included in a conforming financially constrained regional long-range transportation plan adopted by the Metropolitan Planning Organization (MPO). This project is included in the Visualize 2045 Air Quality Conformity Analysis for the financially constrained element of the Visualize 2045 long-range transportation plan and FY2019-2024 Transportation Improvement Program (TIP) (National Capital Region Transportation Planning Board, October 17, 2018).</p>
<b>NATURAL RESOURCES</b>			
Terrestrial Wildlife Habitat	Review of SEIS, and historic and current aerial photography. Field review.	No substantial change.	<p>The SEIS identified impacts to wildlife habitat from the removal of vegetation. SEIS Figure III-10 indicates that forest habitats were present along the relocated Balls Ford Road between the Norfolk Southern Railroad and Wellington Road. Most of these forest lands have since been replaced by industrial development. Based on review of current (2018) and historic (1994) aerial photography (see Figure 2), the area of the proposed interchange is currently, and was formerly, disturbed forest land fragmented by roads, utility corridors, and stormwater facilities.</p> <p>As much of the forest lands that were present at the time of the SEIS have since been developed, construction of the interchange and relocated Balls Ford Road would result in the loss of fewer acres of forested habitat than originally anticipated by the SEIS.</p>
Threatened & Endangered Species	Review of SEIS; field reconnaissance; US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) online project review process; and Virginia Department of Game and Inland Fisheries (VDGIF)	Minor change.	<p>The SEIS did not identify any potential impacts to federally listed threatened or endangered species as a result of construction of the Route 234 Bypass. The SEIS identified unconfirmed reports of the state-threatened loggerhead shrike along the proposed bypass and committed to mitigation of potential impacts should the presence of the birds be confirmed.</p> <p>The official federally listed species list was updated as part of the environmental studies for the proposed improvements by completing the online project review through USFWS's IPaC system (see <b>Attachment 1</b>). The official species list provided by IPaC consisted of the following endangered species, and the resulting conclusions for each are provided below and</p>

**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
	Virginia Fish and Wildlife Information System (VFWIS) database search.		<p>in Attachment 1:</p> <p><u>Northern Long-Eared Bat (<i>Myotis septentrionalis</i>)</u> – species may be present in the project area given the presence of suitable habitat. The project may affect, but would not likely adversely affect, the northern long-eared bat. In accordance with the 4(d) Rule for the Northern Long-Eared Bat (81 FR 1900), incidental take of northern long-eared bats resulting from tree removal is prohibited if it: (1) Occurs within a 0.25 mile radius of known northern long-eared bat hibernacula; or (2) cuts or destroys known occupied maternity roost trees during the pup season (June 1 through July 31). Based on VDGIF mapping of known northern long-eared bat winter habitat and roost trees, there are no known hibernacula or roost trees in the vicinity of the project. However, there are wooded areas along the project that could potentially provide suitable summer roosting and foraging habitat. To avoid potential incidental take of northern long-eared bats, tree removal would occur outside of the pup season (June 1 through July 31).</p> <p><u>Harperella (<i>Ptilimnium nodosum</i>)</u> – no suitable habitat in the project area. The project would have no effect on harperella since there is no suitable habitat present.</p> <p>Review of the VFWIS identified 11 state-listed species with known or possible presence within three miles of the Prince William Parkway Interchange at Realigned Balls Ford Road project area, including Atlantic sturgeon, northern long-eared bat, yellow lance, little brown bat, tri-colored bat, brook floater, wood turtle, peregrine falcon, loggerhead shrike, Henslow's sparrow, and Appalachian grizzled skipper. These species are not likely to be present within the project area due to the disturbed condition and small area of onsite habitats, as well as their isolation from other natural habitat areas due to surrounding urban development. These species are more likely to occur within larger habitat areas within three miles of the project area, including Manassas National Battlefield Park and Broad Run.</p>
Critical Habitat	Review of SEIS and USFWS IPaC online project review process.	No change.	No Critical Habitat is currently designated within the project area.
Wildlife and Waterfowl Refuges	Review of SEIS and USFWS IPaC online project review process.	No change.	No wildlife or waterfowl refuges are within or proximate to the project area.
Wetlands and Streams	Review of SEIS, National Wetland Inventory (NWI) and National Hydrography Dataset (NHD) mapping, available formal jurisdictional delineations, and historic and current aerial photography. Field review.	Minor change.	<p>The SEIS anticipated wetland and stream impacts along the relocated Balls Ford Road in addition to within the area surrounding the proposed interchange. Based on SEIS Table IV-9 Characteristics and Acreages of Wetlands and Aquatic Sites in conjunction with SEIS Figure IV-7 Wetlands and Aquatic Sites map, approximately 0.03 acre of freshwater forested wetlands, 0.20 acre of freshwater emergent wetlands, and 0.04 acre of intermittent streams were identified as impacted by the relocated Balls Ford Road and the proposed interchange.</p> <p>Wetlands and streams were mapped within the LOD of the current interchange and roadway</p>



**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
			<p>design based on information from a formal jurisdictional delineation performed for the Transform I-66 OTB Project (which includes a portion of the proposed project LOD), review of NWI and NHD maps, and field reconnaissance. Wetlands and streams anticipated to be considered jurisdictional by the United States Army Corps of Engineers (USACE) are shown in <b>Figure 4</b>. A more detailed map of water features, including storm water management ponds and drainage ditches, is provided in <b>Attachment 2</b>. Approximately 1.02 acres of wetlands, 0.69 acre of freshwater ponds, and 2,821 linear feet of streams (2,780 linear feet of intermittent streams and 41 linear feet of perennial streams) are located within the LOD for construction of the interchange and relocation of Balls Ford Road. Specifically, wetlands within the LOD include approximately 0.54 acre of freshwater emergent wetlands and 0.48 acre of freshwater forested/shrub wetland.</p> <p>A formal jurisdictional delineation will be completed during final design. Efforts will be made during project design to avoid impacts to streams and wetlands to the extent practicable. Where streams or wetlands cannot be avoided, impacts will be minimized by measures such as making minor shifts in alignment, using retaining walls to reduce fill impacts, and locating planned stormwater management facilities in upland areas.</p> <p>See "Mitigation Measures" section below for discussion of compensatory mitigation for wetland and stream impacts.</p>
Public Water Supply	Review of SEIS and Prince William County Service Authority's (PWCSA) 2017 Water Quality Report – West 6153251.	No change.	No public water supply sources are present in the project vicinity. Public drinking water within western Prince William County is drawn from the Potomac River and Lake Manassas. The Potomac River water is treated at Fairfax Water's James J. Corbalis, Jr. Water Treatment Plant, whereas Lake Manassas has its own treatment plant. Water quality testing by PWCSA in 2016 found that the public water supply met all federal and state water quality standards.
Aquatic Wildlife Habitat	Review of SEIS.	No change.	As indicated in the SEIS, fish species would be impacted to some degree by construction of the new roadway. Potential impacts include changes in water quality, physical impediments to fish movements, changes in actual habitat, and changes in such hydrological parameters as current velocity, depth, and flood levels. To minimize such impacts, new culverts will be designed to maintain a natural channel bottom and adequate water flow.
Floodplains	Review of SEIS and Federal Emergency Management Agency (FEMA) 100-year floodplain mapping (latest update 1/12/01).	No change.	Floodplain locations shown in SEIS Figure III-12 in the vicinity of the proposed Balls Ford Road interchange and the relocated Balls Ford Road appear consistent with current 100-year floodplain mapping shown in Figure 4. While there are floodplains associated with Dawkins Branch and an unnamed stream south of the project location, no encroachments of 100-year floodplains are anticipated due to construction of the proposed improvements.
Resource Protection Areas	Review of SEIS and current Resource Protection Area (RPA) mapping.	Minor change.	<p>According to SEIS Figure III-13 Resource Protection Areas and SEIS Table IV-11 Resource Protection Area Encroachments, the relocated Balls Ford Road would encroach upon 0.46 acres of a RPA associated with an unnamed tributary to Broad Run.</p> <p>The mapping of RPAs within Prince William County has been revised since the establishment of RPA designation criteria by the Commonwealth of Virginia in 2001 (9 VAC 10-20-10 et</p>

**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
			seq.). Under the criteria, RPAs include, at minimum, areas within a 100-foot buffer area of water bodies with perennial flow, tidal shores and wetlands, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, and other lands adjacent to water bodies with perennial flow that have an intrinsic water quality value. Based on the current design and RPA mapping, the proposed project does not encroach on any RPAs.
Water Quality	Review of SEIS, NWI and NHD mapping, and 2016 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report.	Minor change.	As discussed in the SEIS, the increase in impervious surfaces associated with roadway construction results in an increase in stormwater runoff, which can transport roadway pollutants and sediments into nearby streams. The widening of Balls Ford Road will require an incremental increase in impervious surfaces and will thus result in an incremental increase in the volume of stormwater runoff. To minimize these impacts, appropriate permanent erosion and sediment control best management practices would be implemented in accordance with state and federal regulations. Such practices have improved with the establishment of Municipal Separate Storm Sewer Systems (MS4) Permits under the National Pollutant Discharge Elimination System (NPDES) and Virginia Stormwater Management Program (VSMP), under which Prince William County began its MS4 permit program in December 2014.
Energy	Review of SEIS and new traffic forecast.	No change.	As anticipated in the SEIS, the construction of the Route 234 Bypass would require the short-term consumption of energy resources. The traffic-reducing benefits of the project, however, may reduce fuel consumption over the long term.
Hazardous Waste Sites	Review of SEIS, EPA Facility Registry Service, and field review.	Minor change.	<p>The SEIS identified possible releases of hazardous materials at four sites in the vicinity of the proposed Balls Ford Road interchange and relocated Balls Ford Road, including three sites along the Norfolk Southern Railroad between I-66 and Balls Ford Road and a possible oil leak at a trailer storage site along Wellington Road.</p> <p>A review of EPA's Facility Registry Service data (2018) identified multiple sites that use and/or store hazardous materials within 0.5 mile of the project location, including one Resource Conservation and Recovery Act (RCRA) large quantity generator (LQG), 16 RCRA small quantity generators (SQGs), and six facilities listed under the Integrated Compliance Information System (ICIS), which contains enforcement and compliance information. No releases of hazardous materials have been observed or are reported for facilities located within the LOD. A Phase I Site Assessment will be performed if needed prior to right-of-way acquisition and construction to determine whether there is the potential for any sites to have resulted in soil or groundwater contamination within the project area.</p>
<b>HISTORIC &amp; ARCHAEOLOGICAL RESOURCES</b>			
Architectural Resources	Review of SEIS and Virginia Cultural Resource Information System (VCRIS).	No change.	<p>As indicated by SEIS Figure III-8, no National Register of Historic Places (NRHP)-listed or eligible architectural sites were identified near the Prince William Parkway Interchange at Realigned Balls Ford Road project area.</p> <p>A review of the VCRIS database and cultural resource studies from other nearby projects</p>

**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
			<p>identified no NRHP-eligible architectural resources. The Manassas Battlefield Historic District is within a half mile of the project but is on the opposite side of I-66 and would not be affected by the project.</p>
<p>Archaeological Resources</p>	<p>Review of SEIS; 2007 Phase I Archaeological Survey of the Florida Rock Property; Phase II Archaeological Survey of Site 44PW1672; and VCRIS.</p>	<p>No change.</p>	<p>As indicated by SEIS Figure III-8, no NRHP-listed or eligible archaeological sites were identified near the Prince William Parkway and Balls Ford Road interchange project area.</p> <p>A Phase I Archaeological Survey completed in 2007 for a 113-acre parcel located at Balls Ford Road and Doane Drive identified one archaeological site (Site 44PW1672) in the current Area of Potential Effects (APE) that was considered potentially eligible and was recommended for Phase II archaeological evaluation if scheduled to be impacted in the future. Accordingly, a Phase II evaluation was completed for Site 44PW1672 that consisted of archival research to understand the site history and subsurface investigations to identify archaeological resources. The Phase II excavation did not encounter subsurface features or buried surfaces, and the artifact assemblage was miniscule. Based on the extremely low artifact density, the recovery of artifacts from near-surface contexts, the lack of intact deposits across the site, and the absence of prehistoric or historic cultural features, the site was recommended not eligible for listing in the NRHP. DHR concurred with this recommendation on March 28, 2019 (see <b>Attachment 3</b>). A review of the VCRIS database on January 18, 2019 for the Balls Ford Road Interchange project area identified no additional potentially-eligible archaeological resources within the current APE.</p> <p>On June 20, 2019, DHR concurred with the County's no historic properties affected determination for the project (see Attachment 3).</p>
<b>INDIRECT &amp; CUMULATIVE IMPACTS</b>			
<p>Socioeconomic Impacts</p>	<p>SEIS review.</p>	<p>No substantial change.</p>	<p>As noted in the SEIS, transportation projects may influence land use by altering or improving access to developable lands. The SEIS concluded that residential, commercial, and industrial land uses were already expanding in Prince William County, and that the Route 234 Bypass project may accelerate the pace by making land more accessible. The Route 234 Bypass project was included in the County's 1990 Comprehensive Plan, and therefore the SEIS concluded that the project was part of the planned growth of the County.</p> <p>The proposed improvements as currently designed would reduce traffic congestion and delay at the intersection of Prince William Parkway and Balls Ford Road, thereby making travel to adjacent development more expedient. This improved access remains consistent with the current Prince William County Strategic Plan 2017-2020, which encourages the expansion of industries in the County and identifies the areas surrounding the interchange as centers of industry and employment.</p> <p>The direct impacts of the proposed interchange and Balls Ford Road improvements to the socioeconomic environment do not differ substantially from those anticipated in the SEIS. The effects of past, present, and reasonably foreseeable future projects on the socioeconomic</p>

**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
			environment have occurred and are expected to continue to occur, consistent with the goals and objectives of consecutive Prince William County Comprehensive Plans. Therefore, no new adverse cumulative effects on the socioeconomic environment are anticipated from the proposed improvements when combined with other past, present, and reasonably foreseeable future projects.
Natural Resource Impacts	SEIS review	No substantial change.	<p>The SEIS identified potential indirect hydrologic impacts resulting from alteration of drainage characteristics of wetlands and aquatic sites. Implementation of appropriate permanent erosion and sediment control best management practices in accordance with state and federal regulations would avoid substantial indirect effects downstream of the project.</p> <p>The direct impacts of the proposed interchange and Balls Ford Road improvements to natural resources do not differ substantially from those anticipated in the SEIS. While rapid growth and development within Prince William County has continued to adversely affect natural resources (e.g. degradation of water quality and loss of wildlife habitat), such growth within the County had been anticipated in the SEIS. No new adverse cumulative effects on natural resources are anticipated from the proposed improvements when combined with other past, present, and reasonably foreseeable future projects. Some adverse effects may be reduced by more stringent environmental regulations that have been implemented since the publication of the SEIS, especially in the area of stormwater management, as discussed in Water Quality above.</p>
<b>CONSTRUCTION IMPACTS</b>			
Traffic and Transportation	SEIS review.	No change.	Similar to what was anticipated in the SEIS, construction of the proposed improvements may result in temporary detours and traffic delays. Construction of the proposed interchange would be phased such that the existing intersection of Prince William Parkway and Balls Ford Road would be maintained until the new interchange and relocated Balls Ford Road are constructed and operational. Temporary lane closures may be required for ramp construction and where the relocated Balls Ford Road ties into the existing Balls Ford Road and Devlin Road. A detailed Maintenance of Traffic (MOT) Plan will be prepared during final design.
Emergency Services	SEIS review.	No change.	The SEIS concluded that there would be no increases in response time of emergency vehicles because the project would not close any major local roads. Measures to avoid or minimize potential delays resulting from lane closures will be included in the MOT Plan.
Air Quality	SEIS review.	No change.	The SEIS identified temporary air quality impacts from project construction, including exhaust emissions from construction equipment and dust generated by construction activities on disturbed earth. These impacts would be minimized by adherence to VDOT's 2016 <i>Road and Bridge Specifications</i> .
Noise	SEIS review.	No change.	As indicated in the SEIS, noise receptors that would be sensitive to highway noise would also be sensitive to noise from construction equipment while the project is being built. Adherence to noise control provisions contained in VDOT's 2016 <i>Road and Bridge Specifications</i> would minimize effects of construction noise.

**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
Wetlands and Streams	SEIS review.	No change.	Construction of the proposed improvements may result in permanent and/or temporary impacts to wetlands and streams. Avoidance and minimization measures for permanent impacts to wetlands and streams would follow the procedures discussed under the "Natural Resources" and "Mitigation Measures" subheadings. As noted in the SEIS, temporary impacts to wetlands and streams during construction may occur from temporary clearing and filling associated with relocation of underground utilities and provision of construction access; and temporary stream diversion during culvert construction. Areas of temporary disturbance would be restored to pre-construction conditions.
Water Quality	SEIS review.	No change.	As discussed in the SEIS, project construction may result in short-term water quality impacts from erosion and associated sedimentation. As discussed further below, erosion and sediment control measures will be implemented to minimize water quality impacts from increased levels of sedimentation and turbidity.
<b>MITIGATION MEASURES</b>			
Relocations	SEIS review.	No change.	Each of the businesses displaced by the proposed action would be relocated in accordance with the <i>Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970</i> , as amended. Relocation resources will be made available to all displaced businesses without discrimination.
Noise	SEIS review.	No change.	No new noise impacts have been identified and no noise abatement measures are warranted.
Threatened & Endangered Species	SEIS review; information from USFWS, VDCR, and VDGIF.	Change (avoidance measures for newly-listed species).	To avoid potential incidental take of northern long-eared bats, tree removal would occur outside of the pup season (June 1 through July 31).
Wetlands	SEIS review.	Minor change (additional compensation required for more refined estimate of impacts)	<p>In 2008, EPA and the USACE expanded the 404(b)(1) Guidelines to include more comprehensive standards for compensatory mitigation. Under the Final Rule for Compensatory Mitigation for Losses of Aquatic Resources (DOD 33 CFR Parts 325 and 332, EPA 40 CFR Part 230), compensation follows a hierarchy of preferred mitigation approaches that include: 1) mitigation banks; 2) in-lieu fees; and 3) permittee-responsible mitigation.</p> <p>If required, compensation for unavoidable wetland and stream impacts would be provided as part of the permit conditions for any authorizations issued by the USACE and Virginia Department of Environmental Quality (VDEQ). Because these agencies determine the compensation requirements for stream impacts on a case-by-case basis, the quantitative requirements for the project would be determined with them as part of the permit application process.</p>
Water Quality	SEIS review.	No change.	<p>The SEIS recommended erosion and sediment control measures to be implemented to minimize water quality impacts from increased levels of sedimentation and turbidity. Control measures may include berms, dikes, sediment basins, fiber MATS™, straw silt barriers, netting, mulch, temporary and permanent seeding, and other methods.</p> <p>Construction impacts to in-stream aquatic habitats may be minimized to the extent practicable by avoiding stream relocations and by crossing streams at right angles. To the extent</p>

**TABLE 1. EVALUATION OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS**

Issue or Area of Concern	Method of Review	Impact Change	Comments
			possible, construction equipment will be restricted from fording and otherwise disrupting in-stream habitats.
Hazardous Waste Sites	SEIS review.	No change.	A Phase I Site Assessment will be performed if needed prior to right-of-way acquisition and construction to determine the potential for soil and/or groundwater contamination to be present at the project site.
Air Quality	SEIS review.	No change.	Construction impacts ranging from exhaust emissions from construction equipment to dust generated by construction activities on disturbed earth would be minimized by enforcement of construction specifications and adherence to the VDEQ regulations.

**TABLE 2. SUMMARY OF IMPACTS FOR THE PRINCE WILLIAM PARKWAY INTERCHANGE AT REALIGNED BALLS FORD ROAD PROJECT AREA**

Category	Per Route 234 Bypass SEIS 1994	Per Current Limits of Disturbance and Resource Mapping 2018
Right-of-Way Required (acres)	unknown*	47.46
Residences (units)	0	0
Businesses	1-2	1
Schools	0	0
Other Community Facilities (rescue squads, fire stations, etc.)	0	0
Prime and Unique Farmland (acres)	unknown*	0
Forest (acres)	unknown*	64.33
Parks and Recreational Resources	0	0
Historic Districts (#)	0	0
Archaeological Sites (#)	0	0
Stream Crossings (#)	2	8
Stream Impacts**	0.07 acre	2,821 linear feet
Wetland and Aquatic Sites (#)	3	14
Wetland and Aquatic Sites (acres)	0.23	1.71
Floodplains Crossed	0	0
Floodplains (acres)	0	0
Noise Impacts (Number of Receptors Impacted)	0	0
Known Hazardous Material Sites Impacted (#)	4	0
Resource Protection Areas (acres)	0.46	0

\* Specific quantities for the Balls Ford Road interchange area were not identified in the SEIS.

\*\* Impacts to streams were reported in acres in the 1994 SEIS and measured in linear feet for this Environmental Studies document based on the mapping shown in Figure 4 and Attachment 2.

**TABLE 3. PERMITS AND AUTHORIZATIONS**

<b>Permit/Authorization</b>	<b>Law</b>	<b>Agency</b>
Section 404 Permit	Clean Water Act (CWA)	USACE
Section 401 Water Quality Certification	CWA	VDEQ
Section 402 National Pollutant Discharge Elimination System (NPDES) Permit	CWA	VDEQ
Subaqueous Bed Permit (no applicable water resources present)	Virginia Water Law	Virginia Marine Resources Commission (VMRC)
Section 7 Consultation	Endangered Species Act (ESA)	USFWS
Section 106 Consultation	National Historic Preservation Act (NHPA)	Virginia Department of Historic Resources (VDHR)



**5. FINDINGS/CONCLUSION**

Based on the foregoing discussion, this Environmental Studies document demonstrates that, with respect to the Prince William Parkway Interchange at Realigned Balls Ford Road Project, changes to the project, changes in the affected environment, and changes in applicable regulatory requirements and guidance will not result in significant environmental impacts not already considered in the previous environmental documentation. In addition, there is no new information or circumstances relevant to environmental concerns and bearing on the proposed action or its impacts that would result in significant impacts not identified in the previous environmental documentation. Accordingly, no further studies are warranted, the 1991 FEIS and 1994 SEIS remain valid, and a Supplemental Environmental Impact Statement is not necessary.

The FHWA concurs with this determination:

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Federal Highway Administration

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Date

**ATTACHMENT 1**  
**THREATENED AND ENDANGERED SPECIES DOCUMENTATION**

**From:** [Gresham, Danielle](#)  
**To:** [Virginia Field Office, FW5](#)  
**Cc:** [Ashton, Surbhi](#); [Tyler, Stuart](#)  
**Subject:** RE: [EXTERNAL] Online project review certification letter - Prince William Parkway Interchange at Realigned Balls Ford Road Project  
**Date:** Tuesday, May 21, 2019 4:23:41 PM  
**Attachments:** [210513\\_BallsFordRd-234Interchange\\_project\\_review\\_certification\\_SIGNED.pdf](#)

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Rachel,

Thank you for providing the link to the updated Self-Certification Letter. Attached is an updated letter for the Prince William Parkway Interchange at Realigned Balls Ford Road Project.

Best regards,  
Danielle

**From:** rachel\_case@fws.gov <rachel\_case@fws.gov> **On Behalf Of** Virginia Field Office, FW5  
**Sent:** Tuesday, May 21, 2019 10:29 AM  
**To:** Gresham, Danielle <Danielle.Gresham@parsons.com>  
**Subject:** Re: [EXTERNAL] Online project review certification letter - Prince William Parkway Interchange at Realigned Balls Ford Road Project

Danielle,

Thank you for your project submission. To complete your project package, we would need an updated template for the Self-Certification Letter which can be found on our website at: [https://www.fws.gov/northeast/virginiafield/endangered/projectreviews\\_step8.html](https://www.fws.gov/northeast/virginiafield/endangered/projectreviews_step8.html) [fws.gov].

Regards,  
Rachel

On Mon, May 13, 2019 at 11:05 PM Gresham, Danielle <[Danielle.Gresham@parsons.com](mailto:Danielle.Gresham@parsons.com)> wrote:

Dear USFWS Virginia Field Office Representative,

I am submitting this project review package on behalf of the Prince William County Department of Transportation for the Prince William Parkway Interchange at Realigned Balls Ford Road Project (Consultation Code: 05E2VA00-2019-SLI-3991, Event Code: 05E2VA00-2019-E-09454).

The following attachments are provided for this submittal:

1. Official Species List from IPaC (5/13/19)
2. VA Eagle Nest Locator Map (5/13/19)
3. Species Conclusion Table (5/13/19)
4. Verification Letter under January 5, 2016, PBO on Final 4(d) Rule for NLEB (5/13/2019)
5. Online project review certification letter (5/13/19)

Please contact me at [danielle.gresham@parsons.com](mailto:danielle.gresham@parsons.com) if you have any questions, or require additional information regarding this submittal.

Best Regards,

Danielle Gresham

---

Danielle Gresham

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## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Virginia Ecological Services Field Office  
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Gloucester, VA 23061-4410  
Phone: (804) 693-6694 Fax: (804) 693-9032  
<http://www.fws.gov/northeast/virginiafield/>

In Reply Refer To:

May 13, 2019

Consultation Code: 05E2VA00-2019-SLI-3991

Event Code: 05E2VA00-2019-E-09454

Project Name: Prince William Parkway Interchange at Realigned Balls Ford Road Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
-

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Virginia Ecological Services Field Office**

6669 Short Lane

Gloucester, VA 23061-4410

(804) 693-6694

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## Project Summary

Consultation Code: 05E2VA00-2019-SLI-3991

Event Code: 05E2VA00-2019-E-09454

Project Name: Prince William Parkway Interchange at Realigned Balls Ford Road Project

Project Type: TRANSPORTATION

Project Description: The proposed project entails construction of a grade-separated diverging diamond interchange just south of the existing at-grade intersection of the Prince William Parkway and Balls Ford Road. The project also would include the relocation and widening of Balls Ford Road between Devlin Road and Doane Drive and the grade-separation of relocated Balls Ford Road over the Norfolk Southern Railroad.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.78615867418428N77.5501105654761W>



Counties: Prince William, VA

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## Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

### Flowering Plants

NAME	STATUS
Harperella <i>Ptilimnium nodosum</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3739">https://ecos.fws.gov/ecp/species/3739</a>	Endangered

### Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# USFWS National Wildlife Refuge Lands And Fish Hatcheries

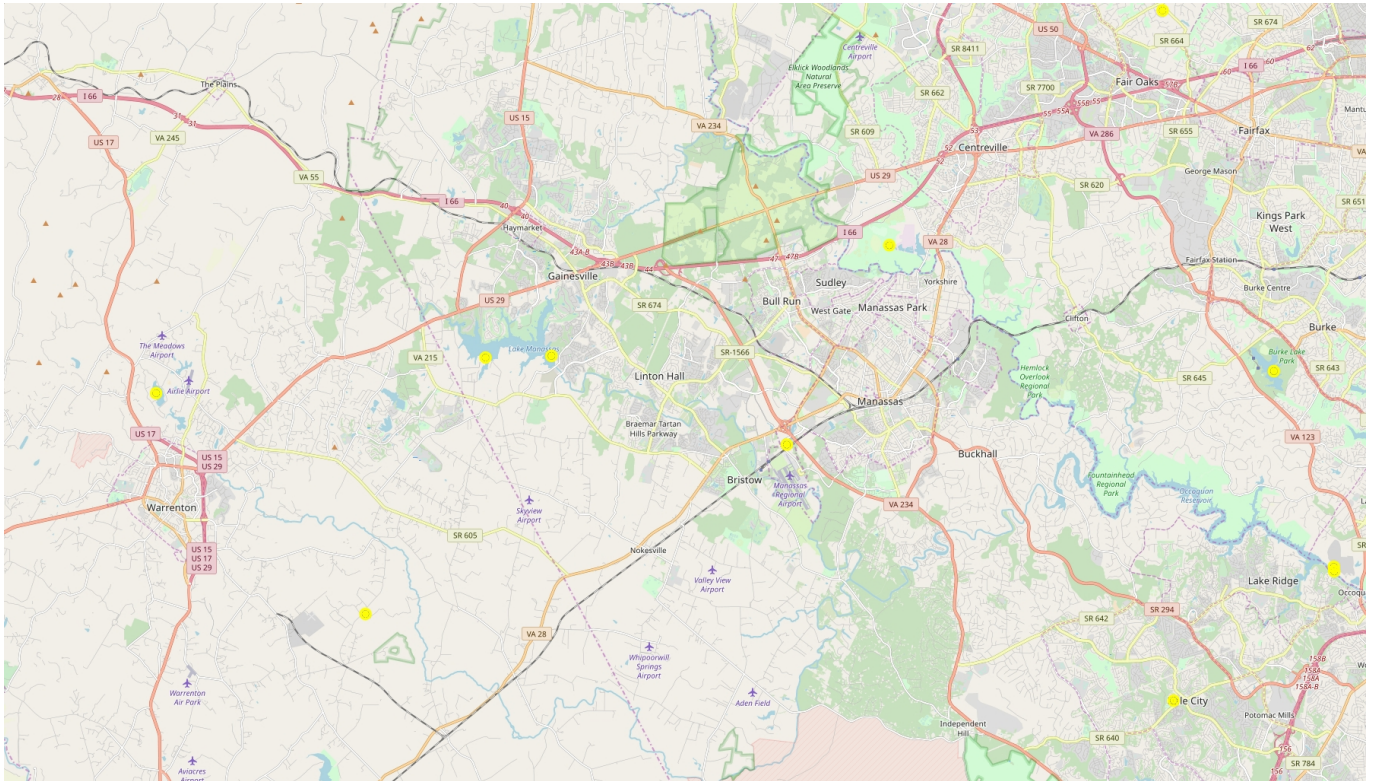
Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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# CCB Mapping Portal



**Layers:** VA Eagle Nest Locator, VA Eagle Nest Buffers

**Map Center [longitude, latitude]:** [-77.58441925048828, 38.77402687828193]

**Map Link:**

[https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&zoom=12&lat=38.77402687828193&lng=-77.58441925048828&legend=legend\\_tab\\_a78d6af8-e398-11e4-ad42-0e0c41326911&base=Street+Map+%28OSM%29](https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&zoom=12&lat=38.77402687828193&lng=-77.58441925048828&legend=legend_tab_a78d6af8-e398-11e4-ad42-0e0c41326911&base=Street+Map+%28OSM%29)

**Report Generated On:** 05/13/2019

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the [Data Use Agreement](#), to ensure compliance with our data use policies. For additional data access questions, view our [Data Distribution Policy](#), or contact our Data Manager, Marie Pitts, at [mlpitts@wm.edu](mailto:mlpitts@wm.edu) or 757-221-7503.

Report generated by [The Center for Conservation Biology Mapping Portal](#).

To learn more about CCB visit [ccbbirds.org](http://ccbbirds.org) or contact us at [info@ccbbirds.org](mailto:info@ccbbirds.org)

### Species Conclusions Table

Project Name: Prince William Parkway Interchange at Realigned Balls Ford Road Project, Prince William County, Virginia, State

Project Number: 6234-076-266; UPC: 112815

Date: 5/13/19

### Listed Species

Species/Resource Name	Conclusion	ESA Section 7/Eagle Act Determination	Notes/Documentation
Northern long-eared bat ( <i>Myotis septentrionalis</i> ) Threatened	Suitable summer roosting and foraging habitat present.	May affect, not likely to adversely affect	05-2019 FWS – Official Species List 05-2019 VDGIF-FWIS online results within 3 miles – Known or Likely species Relying upon the findings of the 1/5/2016 Programmatic Biological Opinion for Final 4(d) Rule on the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions to fulfill project-specific section 7 responsibilities. As a voluntary avoidance and minimization measure, tree removal would occur outside of the pup season (June 1 through July 31)
Harperella ( <i>Ptilimnium nodosum</i> )	No suitable habitat present	No effect	05-2019 FWS – Official Species List Suitable habitat characteristics include stable point bars, bedrock outcrops, and rocky and gravelly shoals in perennial streams and rivers with moderate to swift flow. Field observations within the action area found no such habitat present. Instead, the several intermittent streams and stormwater drainage ditches have clay and mud substrates. Intermittent streams are considered unsuitable habitat because the hydrologic pulsing characteristics needed to support and promote harperella are absent. The largest intermittent tributary has a straight incised channel with vertical banks. Land use and land cover in the action area consist largely of commercial and industrial uses and multiple roadways, the runoff from which is routed through a number of stormwater management ponds within the area.

Bald eagle ( <i>Haliaeetus leucocephalus</i> ) Species of Concern	Unlikely to disturb nesting bald eagles.* Does not intersect with an eagle concentration area.	No Eagle Act permit required.	05-2019 FWS – Official Species List 05-2019 Center for Conservation Biology
Critical habitat	No critical habitat present.	No effect.	

\*All documented nests are over 660' away (2018 data)

## **REFERENCES**

### **Center for Conservation Biology**

2019 Eagle Nest Locator, <http://www.cbbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/>. Accessed May 13, 2019.

### **USFWS (United States Fish and Wildlife Service)**

2019 Virginia Field Office - Bald Eagle Concentration Areas.  
[https://www.fws.gov/northeast/virginiafield/endangered/projectreviews\\_step6b.html](https://www.fws.gov/northeast/virginiafield/endangered/projectreviews_step6b.html)  
Accessed May 13, 2019.

2019 Official Species List – List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project. Consultation Tracking Number: 05E2VA00-2019-SLI-3991. Virginia Ecological Services Field Office, 6669 Short Lane, Gloucester, VA 23061. May 13, 2019.

### **VDGIF (Virginia Department of Game and Inland Fisheries)**

2019 The Virginia Fish and Wildlife Information Service (VAFWIS) – online Geographic Search.  
<http://vafwis.org/fwis/?Title=VaFWIS+Geographic+Search>. Accessed May 13, 2019.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Virginia Ecological Services Field Office  
6669 Short Lane  
Gloucester, VA 23061-4410  
Phone: (804) 693-6694 Fax: (804) 693-9032  
<http://www.fws.gov/northeast/virginiafield/>

In Reply Refer To:

May 13, 2019

Consultation Code: 05E2VA00-2019-TA-3991

Event Code: 05E2VA00-2019-E-09455

Project Name: Prince William Parkway Interchange at Realigned Balls Ford Road Project

Subject: Verification letter for the 'Prince William Parkway Interchange at Realigned Balls Ford Road Project' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Danielle Gresham:

The U.S. Fish and Wildlife Service (Service) received on May 13, 2019 your effects determination for the 'Prince William Parkway Interchange at Realigned Balls Ford Road Project' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"<sup>[1]</sup> prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Harperella, *Ptilimnium nodosum* (Endangered)

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

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## Action Description

You provided to IPaC the following name and description for the subject Action.

### 1. Name

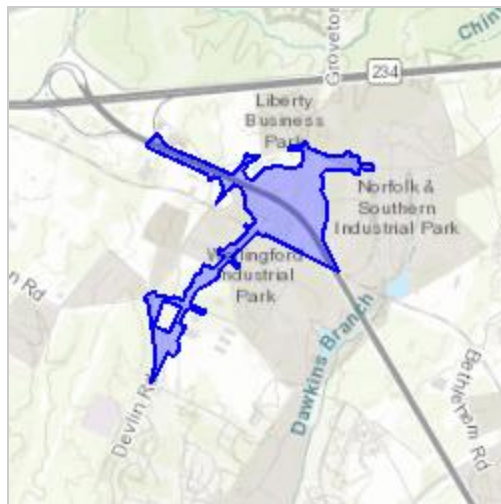
Prince William Parkway Interchange at Realigned Balls Ford Road Project

### 2. Description

The following description was provided for the project 'Prince William Parkway Interchange at Realigned Balls Ford Road Project':

The proposed project entails construction of a grade-separated diverging diamond interchange just south of the existing at-grade intersection of the Prince William Parkway and Balls Ford Road. The project also would include the relocation and widening of Balls Ford Road between Devlin Road and Doane Drive and the grade-separation of relocated Balls Ford Road over the Norfolk Southern Railroad.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.78615867418428N77.5501105654761W>



### Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.



**Determination Key Description: Northern Long-eared Bat 4(d) Rule**

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

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## Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

## Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

*Yes*

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

*No*

3. Will your activity purposefully **Take** northern long-eared bats?

*No*

4. Is the project action area located wholly outside the White-nose Syndrome Zone?

**Automatically answered**

*No*

5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases is available at [www.fws.gov/midwest/endangered/mammals/nleb/nhsites.html](http://www.fws.gov/midwest/endangered/mammals/nleb/nhsites.html).

*Yes*

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

*No*

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7. Will the action involve Tree Removal?

*Yes*

8. Will the action only remove hazardous trees for the protection of human life or property?

*No*

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

*No*

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

*No*

---

## Project Questionnaire

**If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.**

1. Estimated total acres of forest conversion:

64.33

2. If known, estimated acres of forest conversion from April 1 to October 31

64.33

3. If known, estimated acres of forest conversion from June 1 to July 31

0

**If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.**

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

**If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.**

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

**If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.**

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10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?  
*0*



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Virginia Field Office  
6669 Short Lane  
Gloucester, VA 23061

Date: 5/21/19

### Self-Certification Letter

Project Name: Prince William Parkway Interchange at Realigned Balls Ford Road

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA conclusions. These conclusions resulted in:

- “no effect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR § 17.40(o) [as determined through the Information, Planning, and Consultation System (IPaC) northern long-eared bat assisted determination key]; and/or
- “may affect, not likely to adversely affect” determinations for proposed/listed species and/or proposed/designated critical habitat.

We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” or “may affect, not likely to adversely affect” determinations for proposed and listed species and proposed and designated critical habitat. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat becomes available, this determination may be reconsidered. This certification letter is valid for 1 year.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website [http://www.fws.gov/northeast/virginiafield/endspecies/project\\_reviews.html](http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html). If you have any questions, please contact Troy Andersen of this office at (804) 824-2428.

Sincerely,

A handwritten signature in blue ink that reads "Cynthia A. Schulz". The signature is written in a cursive style and is placed on a light blue rectangular background.

Cindy Schulz  
Field Supervisor  
Virginia Ecological Services

Enclosures - project review package

**ATTACHMENT 2**  
**DETAILED WATER RESOURCES MAPS**



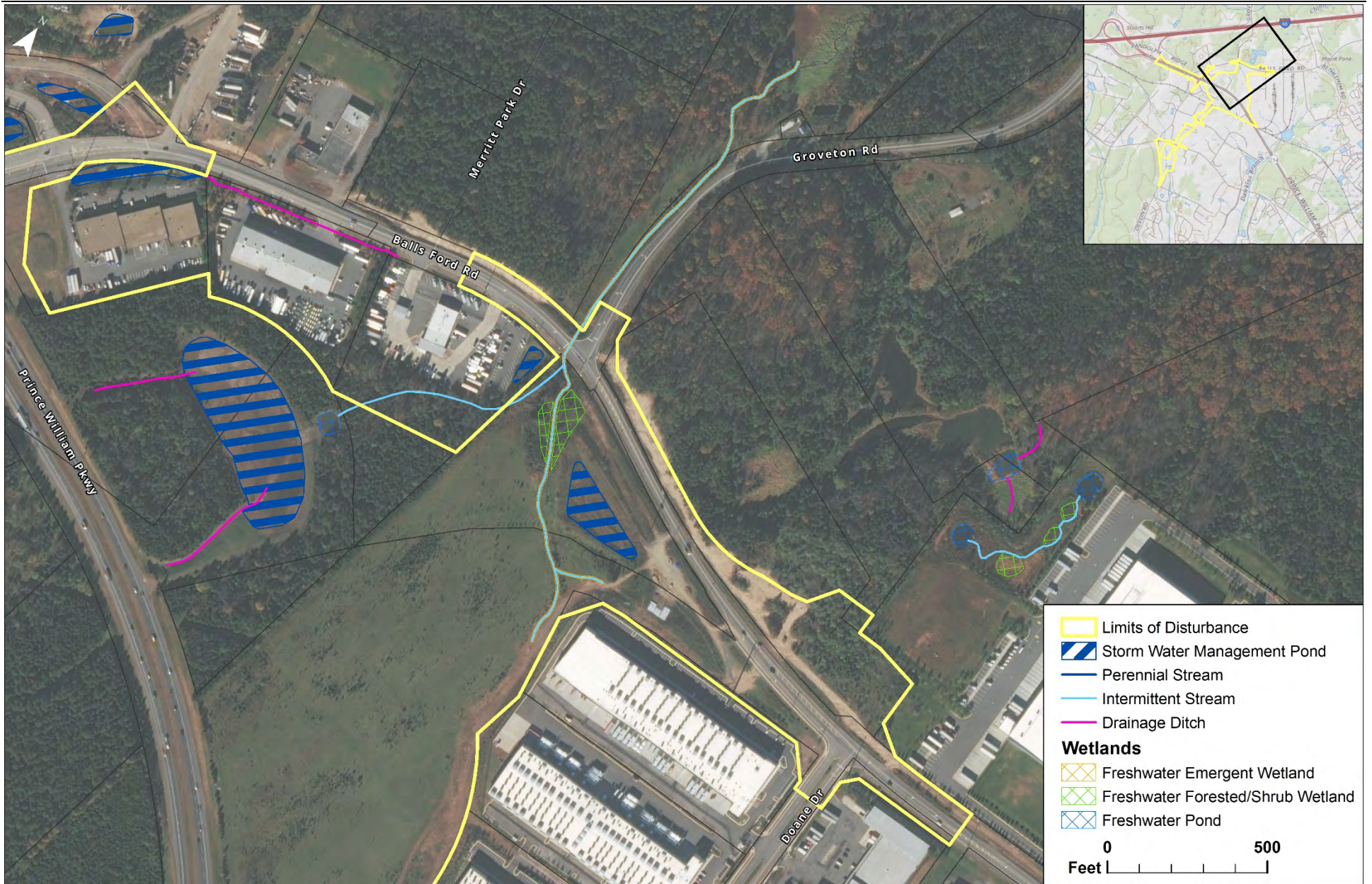












**ATTACHMENT 3**  
**DHR CONCURRENCE LETTERS**



## COUNTY OF PRINCE WILLIAM

5 County Complex Court, Suite 290, Prince William, Virginia 22192-9201  
(703) 792-6825 Metro (703) 631-1703 Fax (703) 792-7159

DEPARTMENT OF  
TRANSPORTATION

Ricardo Canizales  
Director

February 25, 2019

Mr. Marc Holma  
Division of Review and Compliance  
Virginia Department of Historic Resources  
2801 Kensington Avenue  
Richmond, Virginia 23221

**Re: Eligibility Recommendation / Phase II Archaeological Evaluation of Site  
44PW1672, Associated with the Route 234 and Balls Ford Road Interchange  
Project, Prince William County, Virginia  
VDOT Locally Administered Project #0234-076-152, UPC #112815  
DHR File No. 1990-0911**

Dear Mr. Holma:

Dovetail Cultural Resource Group (Dovetail) our sub-consultant for Archaeological Services, conducted a Phase II evaluation of site 44PW1672 in association with the Route 234 and Balls Ford Road Interchange Project in Prince William County, Virginia. The evaluation consisted of close-interval shovel test pit (STP) survey and the excavation of 13 test units (TUs) on site 44PW1672. The Phase II evaluation assessed the National Register of Historic Places (NRHP) eligibility of site 44PW1672.

I am writing you today to coordinate the results of the Phase II archaeological evaluation of site 44PW1672. Attached you will find one hard and one electronic copy of the report entitled *Phase II Archaeological Evaluation of Site 44PW1672, Associated with the Route 234 and Balls Ford Road Interchange Project, Prince William County, Virginia*. The report meets the standards set forth in both the Secretary of Interior's *Standards and Guidelines* (1983) and DHR's *Guidelines for Preparing Identification and Evaluation Reports* (1992; 2017).

### **Project Background and Previous Work at Site 44PW1672**

In June 2018, Prince William County initiated Section 106 coordination of the proposed Route 234 and Balls Ford Road Interchange with your office. A Supplemental Environmental Impact Statement (1994) and a Final Environmental Impact Statement



(1981) were prepared for the Route 234 Bypass Project a number of years ago. Prince William County is currently preparing environmental studies documentation to address changes in environmental consequences of the project since completion of those documents, which includes Section 106 review efforts. To this end, Prince William County submitted a Phase I archaeological survey (Hill et al. 2007) of the cloverleaf design in association with the Route 234 and Balls Ford Road interchange to your office for review in a letter dated June 4, 2018. This report identified four archaeological sites, one of which, 44PW1672, was recommended potentially eligible for NRHP listing. The site was identified based on the presence of both historic and prehistoric components. Artifacts were recovered from the plow zone and, primarily, the surface of a plowed agricultural field. Although artifact density was low, Hill et al. (2007) recommended the site potentially eligible based on the potential presence of subsurface features and intact sub-plow zone contexts. In an email response to this June letter, the DHR concurred with the consultant recommendation that site 44PW1672 is potentially eligible for listing in the NRHP. As such, a Phase II evaluation of the site was undertaken.

### **Archaeological Results**

The Phase II archaeological work consisted of archival research to understand the site history and subsurface investigations to identify archaeological resources within site 44PW1672 as mapped in DHR files and in Hill et al.'s (2007) report. The Phase II effort included visual inspection of the site area, the excavation of a grid of STPs spaced at 25-foot (7.6-m) intervals across the project area, and the excavation of 3-x-3-foot (0.9-m-0.9 m) test units. Excavation of 647 close-interval STPs and 13 TUs resulted in the recovery of only four artifacts, including a prehistoric biface.

Taken together, the Phase I and II assemblages point to intermittent occupation by Native Americans between the Middle Archaic and the Early Woodland, and subsequent historic activity during the eighteenth and early-nineteenth centuries. The Phase II work, however, recovered only four artifacts. Moreover, the project area at present differs strikingly from the landscape described by Hill et al. (2007).

Standing water, wet soils, a rutted, uneven landscape, and the presence of a deflated plow zone directly above subsoil and bedrock indicates disturbance of some sort in the years since Hill et al.'s (2007) fieldwork. The Phase II excavation did not encounter subsurface features or buried surfaces, and the artifact assemblage was miniscule. Therefore, based on the extremely low artifact density, the recovery of artifacts from near-surface contexts, the lack of intact deposits across the site, and the absence of prehistoric or historic cultural features, the likelihood that additional work at the site will contribute important new information about the prehistory and history of Prince William County, Virginia, and the larger region is extremely low. Accordingly, Dovetail recommends site 44PW1672 not eligible for listing in the NRHP under Criterion D.

Phase II Site 44PW1672, DHR File # 1990-0911  
February 25, 2019  
Page 3

We invite you to concur with our recommendation by completing the signature block below and returning it to my attention within 30 days of receipt. Please feel free to contact me at (703) 792-6826 with any questions.

Sincerely,

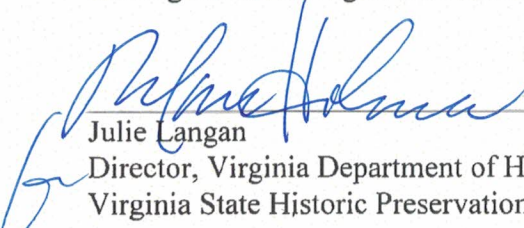


Khattab Shammout, PE, DBIA  
Division Chief, Capital Project  
Design and Construction

Attachment : Phase II archaeological evaluation of site 44PW1672, Associated with Route 234 and Balls Ford Interchange Project

Cc: Justin Patton, County Archaeologist, Prince William County  
Helen Ross, VDOT  
Stuart Tyler, Parsons  
Mike Carmody, Dovetail

The Virginia State Historic Preservation Officer (SHPO) concurs that site 44PW1672 is not eligible for listing in the National Register of Historic Places.



Julie Langan  
Director, Virginia Department of Historic Resources  
Virginia State Historic Preservation Officer

28 MARCH 2019  
Date

1990-0911



May 23, 2019

Mr. Marc Holma  
Division of Review and Compliance  
Virginia Department of Historic Resources  
2801 Kensington Avenue  
Richmond, Virginia 23221

**Re: Project Effects**  
**Prince William Parkway Interchange at Realigned Balls Ford Road Project**  
**Prince William County, Virginia**  
**VDOT Locally Administered Project #6234-076-266, UPC #112815**  
**DHR File No. 1990-0911**

Dear Mr. Holma:

Prince William County is currently completing environmental studies to reevaluate the environmental consequences of a new interchange connecting Balls Ford Road and the Prince William Parkway (Route 234). Under the Virginia Department of Transportation's (VDOT) Locally Administered Projects (LAP) program, the Prince William County Department of Transportation is developing a grade-separated diverging diamond interchange. The new interchange would be located just south of the existing at-grade intersection of the Prince William Parkway and Balls Ford Road (see **Figure 1**). The project also would include the relocation and widening of Balls Ford Road between Devlin Road and Doane Drive and the grade separation of relocated Balls Ford Road over the Norfolk Southern Railroad. The proposed interchange of Prince William Parkway with a realigned Balls Ford Road was a component of the Route 234 Bypass (now Prince William Parkway) project, evaluated in a Supplemental Environmental Impact Statement (SEIS) prepared by VDOT and the Federal Highway Administration (FHWA) in 1994, in accordance with provisions of the National Environmental Policy Act (NEPA) and 23 CFR 771.

The area of potential effects (APE) for direct effects is recommended to be the project footprint and any areas used for temporary or permanent construction easements (identified as the limits of disturbance in Figure 1). The APE for indirect effects is considered to be the project viewshed and includes any areas in which setting and feeling can be impacted by the project. Although it varies, the viewshed is limited by intervening obstructions of buildings and tree lines.



**Figure 1. Limits of Disturbance / APE**

### **Previous Coordination and Technical Studies**

As part of the 1994 SEIS and the Final Environmental Impact Statement (1981) prepared for the Route 234 Bypass Project, comprehensive archaeological and architectural surveys identified no National Register of Historic Places (NRHP)-eligible sites within the area that constitutes the APE for this current Prince William Parkway Interchange at Realigned Balls Ford Road Project. Prince William County has prepared environmental studies documentation to address changes in

environmental consequences of the project since completion of the SEIS and associated documents, which includes Section 106 review efforts. In June 2018, Prince William County initiated Section 106 coordination of the proposed Prince William Parkway Interchange at Realigned Balls Ford Road Project with your office.

On June 4, 2018, Prince William County submitted a Phase I archaeological survey entitled A Phase I Archeological Survey of the Florida Rock Property: A 113-Acre+/- Parcel Located on Balls Ford Road and Doane Drive in Prince William County, Virginia. (Hill et al. 2007). The survey had been prepared for the Prince William County Office of Planning as part of a development review process for the property; but, part of the survey area also is within the proposed footprint of the Prince William Parkway Interchange at Realigned Balls Ford Road Project. The report identified four archaeological sites, one of which, 44PW1672, was recommended potentially eligible for the NRHP listing. In a July 13, 2018 email response to the County's June submission, the Virginia Department of Historic Resources (DHR) concurred with the consultant recommendation that site 44PW1672 was potentially eligible for listing in the NRHP.

Dovetail Cultural Resource Group (Dovetail) completed a Phase II evaluation of site 44PW1672 in January 2019. The report documenting this evaluation entitled *Phase II Archaeological Evaluation of Site 44PW1672, Associated with the Route 234 and Balls Ford Road Interchange Project, Prince William County, Virginia*, was submitted to your office on February 25, 2019 with a recommendation that the site is not eligible for listing in the NRHP based on the extremely low artifact density, the lack of intact deposits across the site, and the absence of prehistoric or historic cultural features. On March 28, 2019, your office concurred with this recommendation.

### **Assessment of Effects**

We have reviewed previous documentation prepared for the larger Route 234 Bypass Project:

1. DHR Report Number PW-067; *Supplemental Phase I Archaeological Survey of Design Changes in Ramps and Cloverleaf in Four Locations Along Rt. 234 in Manassas* (Ryder and Barker 1992).
2. DHR Report Number PW-041; *Phase I Cultural Resources Survey of the Proposed Manassas Bypass, Route 234, Prince William County, Virginia* (McLearen and Harbury 1988). We also have reviewed DHR's online VCRIS database. In 2009, the American Battlefield Protection Program (ABPP), a division of the National Park Service, produced new Civil War battlefield maps for Virginia. The APE for direct and indirect affects for this project is within the Study Area and Core Area for Manassas II (076-5190). The APE for this project is not in the ABPP's recommended Potential National Register District area. Furthermore, intense and substantial development has occurred adjacent the indirect APE such that integrity has been severely compromised. We also note that DHR previously determined during coordination regarding the Transform I-66 Outside the Beltway project that the Manassas Battlefield Historic District boundary lies north of I-66 and is not within the APE for this Prince William Parkway Interchange at Realigned Balls Ford Road Project.

A public meeting was held for this project on April 3, 2019, and no comments were received regarding historic properties. Based on these reviews and DHR's concurrence regarding 44PW1672's non-eligibility, we have concluded that there are no historic properties within the APE for the Prince William Parkway Interchange at Realigned Balls Ford Road Project. Accordingly, we invite your concurrence in a no historic properties affected determination by signing the signature block below

May 23, 2019

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and returning it to my attention within 30 days of receipt. Please feel free to contact me at (703) 792-6826 or the County Archaeologist at (703) 792-5729 or [jspatton@pwcgov.org](mailto:jspatton@pwcgov.org) with any questions.

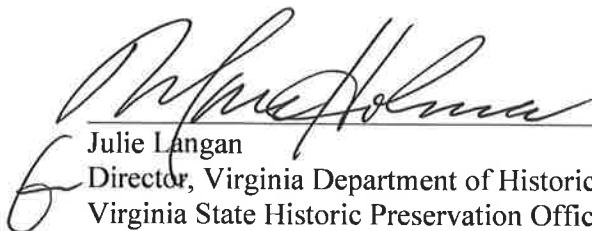
Sincerely,



Khattab Shammout, PE, DBIA  
Division Chief, Capital Project  
Design and Construction

Cc: Justin Patton, County Archaeologist, Prince William County Planning Department  
David Cuff, Historic Prince William  
Helen Ross, VDOT  
Stuart Tyler, Parsons  
Mike Carmody, Dovetail

The Virginia State Historic Preservation Officer (SHPO) concurs with a **no historic properties affected** determination for the Prince William Parkway Interchange at Realigned Balls Ford Road Project (VDOT Locally Administered Project #6234-076-266, UPC #112815).



Julie Langan  
Director, Virginia Department of Historic Resources  
Virginia State Historic Preservation Officer

20 June 2019  
Date

1990-0911