



## DESKTOP WETLAND REVIEW MAP

Chickahominy - Elmcnt Line #557 Rebuild and New Future 230 kV Lines

Charles City, Hanover, and Henrico Counties

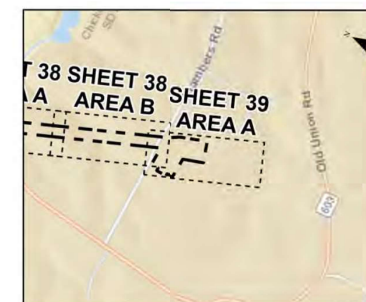
Client:  
Dominion Energy Virginia

C2 Env Project: 0264 Prepared By: ACH Date: 02/10/25

0 100 200 400 Feet  
Scale is 1 IN = 200 FT when printed at original size of 11x17

### SITE DATA

- Project Area
- Existing Structure Location
- Approximate Stream Channel Limits
- Approximate PEM/PSS High Probability Wetland Limits
- Approximate PEM/PSS Medium Probability Wetland Limits
- Approximate PEM/PSS Low Probability Wetland Limits
- Approximate PFO High Probability Wetland Limits
- Approximate PUB Open Water Limits
- Approximate Jurisdictional Ditch Limits
- Existing 2 FT Contour
- Parcel Boundary



C2 ENVIRONMENTAL

SHEET 39 OF 39



## 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



In Reply Refer To:

02/03/2025 17:48:27 UTC

Project Code: 2025-0008153

Project Name: Chickahominy - Elmont 500 kV Transmission Line #557 Rebuild

Subject: List of threatened and endangered species that may occur in your proposed project location 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 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 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:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

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 Project Code 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
- Bald & Golden Eagles
- Migratory Birds

## 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

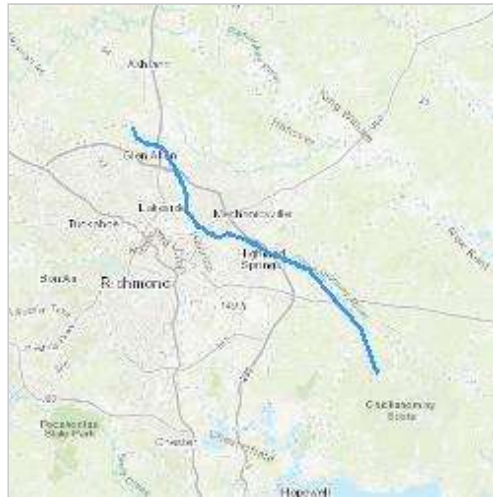


## PROJECT SUMMARY

Project Code: 2025-0008153  
Project Name: Chickahominy - Elmont 500 kV Transmission Line #557 Rebuild  
Project Type: Transmission Line - Maintenance/Modification - Above Ground  
Project Description: 500 kV transmission line rebuild in Hanover, Henrico, and Charles City Counties, VA.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@37.56753325,-77.30878232063716,14z>



Counties: Virginia

## ENDANGERED SPECIES ACT SPECIES

There is a total of 3 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>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Proposed Threatened

## CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

## 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.

## BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act <sup>2</sup> and the Migratory Bird Treaty Act (MBTA) <sup>1</sup>. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

- 
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
  2. The [Migratory Birds Treaty Act](#) of 1918.

### 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

#### Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

#### Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Sep 1 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper



birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Bald Eagle <i>Haliaeetus leucocephalus</i></b> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Sep 1 to Aug 31
<b>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9399">https://ecos.fws.gov/ecp/species/9399</a>	Breeds May 15 to Oct 10
<b>Blue-winged Warbler <i>Vermivora cyanoptera</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9509">https://ecos.fws.gov/ecp/species/9509</a>	Breeds May 1 to Jun 30
<b>Bobolink <i>Dolichonyx oryzivorus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9454">https://ecos.fws.gov/ecp/species/9454</a>	Breeds May 20 to Jul 31
<b>Canada Warbler <i>Cardellina canadensis</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9643">https://ecos.fws.gov/ecp/species/9643</a>	Breeds May 20 to Aug 10
<b>Cerulean Warbler <i>Setophaga cerulea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/2974">https://ecos.fws.gov/ecp/species/2974</a>	Breeds Apr 28 to Jul 20
<b>Chimney Swift <i>Chaetura pelagica</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9406">https://ecos.fws.gov/ecp/species/9406</a>	Breeds Mar 15 to Aug 25



NAME	BREEDING SEASON
<b>Chuck-will's-widow <i>Antrostomus carolinensis</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9604">https://ecos.fws.gov/ecp/species/9604</a>	Breeds May 10 to Jul 10
<b>Eastern Whip-poor-will <i>Antrostomus vociferus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10678">https://ecos.fws.gov/ecp/species/10678</a>	Breeds May 1 to Aug 20
<b>Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8329">https://ecos.fws.gov/ecp/species/8329</a>	Breeds Jun 1 to Aug 20
<b>Kentucky Warbler <i>Geothlypis formosa</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9443">https://ecos.fws.gov/ecp/species/9443</a>	Breeds Apr 20 to Aug 20
<b>King Rail <i>Rallus elegans</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8936">https://ecos.fws.gov/ecp/species/8936</a>	Breeds May 1 to Sep 5
<b>Lesser Yellowlegs <i>Tringa flavipes</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
<b>Pectoral Sandpiper <i>Calidris melanotos</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9561">https://ecos.fws.gov/ecp/species/9561</a>	Breeds elsewhere
<b>Prairie Warbler <i>Setophaga discolor</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9513">https://ecos.fws.gov/ecp/species/9513</a>	Breeds May 1 to Jul 31
<b>Prothonotary Warbler <i>Protonotaria citrea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9439">https://ecos.fws.gov/ecp/species/9439</a>	Breeds Apr 1 to Jul 31
<b>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9398">https://ecos.fws.gov/ecp/species/9398</a>	Breeds May 10 to Sep 10

NAME	BREEDING SEASON
<b>Rusty Blackbird</b> <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9478">https://ecos.fws.gov/ecp/species/9478</a>	Breeds elsewhere
<b>Scarlet Tanager</b> <i>Piranga olivacea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/11967">https://ecos.fws.gov/ecp/species/11967</a>	Breeds May 10 to Aug 10
<b>Semipalmated Sandpiper</b> <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9603">https://ecos.fws.gov/ecp/species/9603</a>	Breeds elsewhere
<b>Wood Thrush</b> <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9431">https://ecos.fws.gov/ecp/species/9431</a>	Breeds May 10 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

### Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

### Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

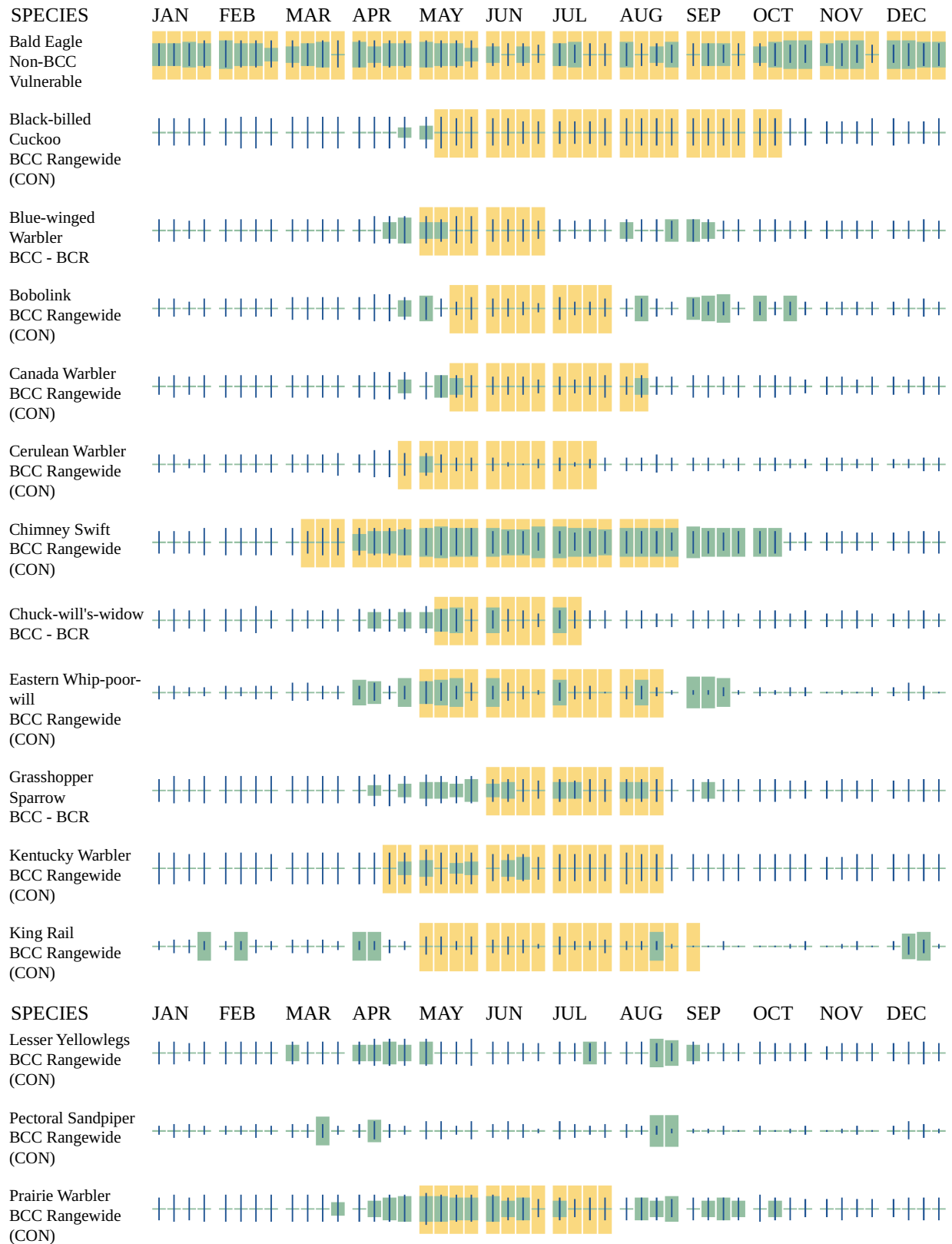
### No Data (—)

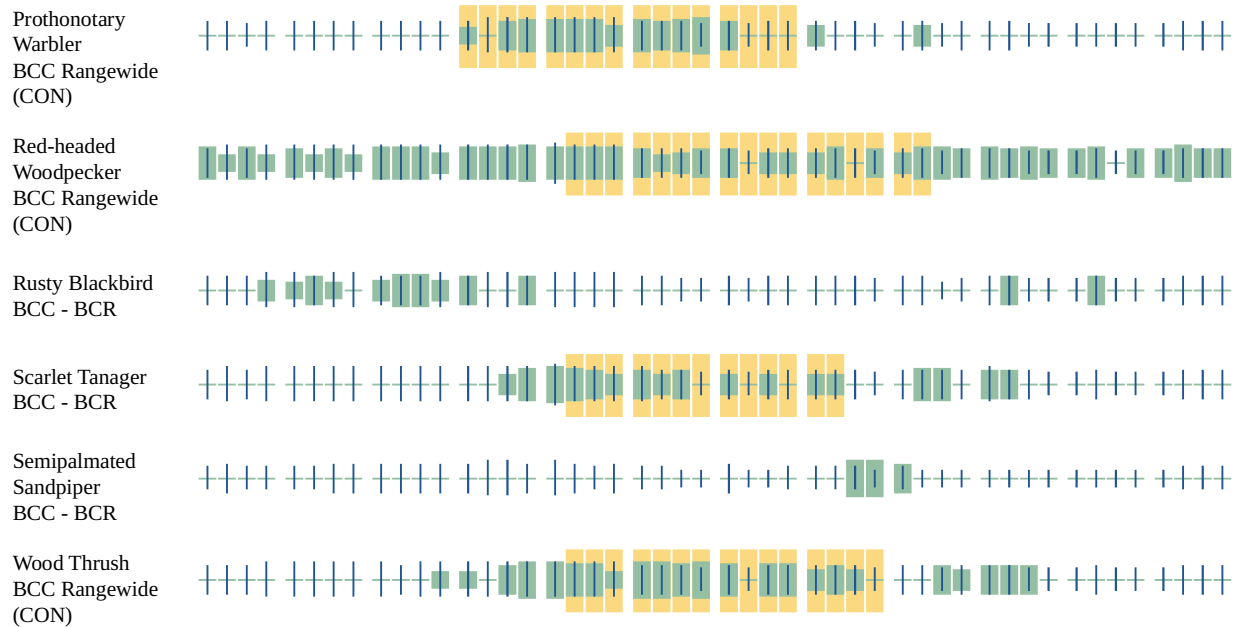
A week is marked as having no data if there were no survey events for that week.

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■ probability of presence   ■ breeding season   | survey effort   — no data

Project code: 2025-0008153





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

**IPAC USER CONTACT INFORMATION**

Agency: Private Entity  
Name: Emily Ramos  
Address: 11846 Rock Landing Drive  
Address Line 2: Suite A  
City: Newport News  
State: VA  
Zip: 23606  
Email: eramos@c2environmental.com  
Phone: 7572768379

**LEAD AGENCY CONTACT INFORMATION**

Lead Agency: U.S. Fish and Wildlife Service

**VaFWIS Search Report** Compiled on 2/3/2025, 3:08:32 PM[Help](#)

Known or likely to occur within a **2 mile buffer around line beginning 37.4489000 -77.1285699**  
in **036 Charles City County, 085 Hanover County, 087 Henrico County, 127 New Kent County, 760**  
**Richmond City, VA**

[View Map of  
Site Location](#)

615 Known or Likely Species ordered by Status Concern for Conservation  
(displaying first 34) (34 species with Status\* or Tier I\*\* or Tier II\*\* )

<a href="#">BOVA Code</a>	<a href="#">Status*</a>	<a href="#">Tier**</a>	<a href="#">Common Name</a>	<a href="#">Scientific Name</a>	<a href="#">Confirmed</a>	<a href="#">Database(s)</a>
050022	FEST	Ia	<a href="#">Bat, northern long-eared</a>	Myotis septentrionalis		BOVA
060017	FESE	Ia	<a href="#">Spinymussel, James</a>	Parvaspina collina		BOVA
060003	FESE	Ia	<a href="#">Wedgemussel, dwarf</a>	Alasmidonta heterodon		BOVA
010032	FESE	Ib	<a href="#">Sturgeon, Atlantic</a>	Acipenser oxyrinchus		BOVA
040110	FTSE	Ia	<a href="#">Rail, eastern black</a>	Laterallus jamaicensis jamaicensis		BOVA
060173	FTST	Ia	<a href="#">Pigtoe, Atlantic</a>	Fusconaia masoni		BOVA
060029	FTST	IIa	<a href="#">Lance, yellow</a>	Elliptio lanceolata		BOVA
050020	SE	Ia	<a href="#">Bat, little brown</a>	Myotis lucifugus		BOVA
050034	SE	Ia	<a href="#">Bat, Rafinesque's eastern big-eared</a>	Corynorhinus rafinesquii macrotis	<a href="#">Yes</a>	BOVA,SppObs,HU6
050027	FPSE	Ia	<a href="#">Bat, tri-colored</a>	Perimyotis subflavus		BOVA
040096	ST	Ia	<a href="#">Falcon, peregrine</a>	Falco peregrinus		BOVA
040293	ST	Ia	<a href="#">Shrike, loggerhead</a>	Lanius ludovicianus		BOVA
040379	ST	Ia	<a href="#">Sparrow, Henslow's</a>	Centronyx henslowii		BOVA
060081	FPST	IIa	<a href="#">Floater, green</a>	Lasmigona subviridis		BOVA
040292	ST		<a href="#">Shrike, migrant loggerhead</a>	Lanius ludovicianus migrans		BOVA
100079	FP	IIIa	<a href="#">Butterfly, Monarch</a>	Danaus plexippus		BOVA
030067	CC	IIa	<a href="#">Terrapin, northern diamond-backed</a>	Malaclemys terrapin terrapin		BOVA,HU6
030063	CC	IIIa	<a href="#">Turtle, spotted</a>	Clemmys guttata	<a href="#">Yes</a>	BOVA,SppObs,HU6
030031	CC	IIIc	<a href="#">Kingsnake, scarlet</a>	Lampropeltis elapsoides		BOVA
010077		Ia	<a href="#">Shiner, bridge</a>	Notropis bifrenatus		BOVA



040092		Ia	<a href="#">Eagle, golden</a>	Aquila chrysaetos	<a href="#">Yes</a>	BOVA,SppObs,HU6
060084		Ib	<a href="#">Pigtoe, Virginia</a>	Lexingtonia subplana		BOVA
040213		Ic	<a href="#">Owl, northern saw-whet</a>	Aegolius acadicus		BOVA
040052		IIa	<a href="#">Duck, American black</a>	Anas rubripes		BOVA,HU6
040029		IIa	<a href="#">Heron, little blue</a>	Egretta caerulea caerulea	<a href="#">Potential</a>	BOVA,BBA
040036		IIa	<a href="#">Night-heron, yellow-crowned</a>	Nyctanassa violacea violacea		BOVA
040181		IIa	<a href="#">Tern, common</a>	Sterna hirundo		HU6
040320		IIa	<a href="#">Warbler, cerulean</a>	Setophaga cerulea	<a href="#">Potential</a>	BOVA,BBA,HU6
040140		IIa	<a href="#">Woodcock, American</a>	Scolopax minor	<a href="#">Yes</a>	BOVA,BBA,SppObs,HU6
060071		IIa	<a href="#">Lampmussel, yellow</a>	Lampsilis cariosa		BOVA
040203		IIb	<a href="#">Cuckoo, black-billed</a>	Coccyzus erythrophthalmus	<a href="#">Yes</a>	BOVA,SppObs,HU6
040105		IIb	<a href="#">Rail, king</a>	Rallus elegans		BOVA,HU6
080336		IIc	<a href="#">Beetle, Gammon's stenelmis riffle</a>	Stenelmis gammoni		BOVA
100003		IIc	<a href="#">Skipper, rare</a>	Problema bulenta		BOVA

To view **All 615 species** [View 615](#)

\*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

\*\*I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need  
 Virginia Wildlife Action Plan Conservation Opportunity Ranking:  
 a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.; c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

[View Map of All Query Results from All Observation Tables](#)

Bat Colonies or Hibernacula: **Not Known**

**Anadromous Fish Use Streams** ( 1 records )

[View Map of All Anadromous Fish Use Streams](#)

Stream ID	Stream Name	Reach Status	Anadromous Fish Species			View Map
			Different Species	Highest TE*	Highest Tier**	

C120	<a href="#">Chickahominy River</a>	Confirmed	1		IV	<a href="#">Yes</a>
------	------------------------------------	-----------	---	--	----	---------------------

**Impediments to Fish Passage** ( 8 records )
[View Map of All Fish Impediments](#)

ID	Name	River	View Map
376	<a href="#">BARKERS MILLPOND DAM</a>	ELDER SWAMP	<a href="#">Yes</a>
378	<a href="#">CHICKAHOMINY MILL DAM</a>	CHICKAHOMINY RIVER	<a href="#">Yes</a>
385	<a href="#">EBERHARD DAM</a>	BOAR SWAMP	<a href="#">Yes</a>
372	<a href="#">GAINES MILL DAM</a>	POWHITE CREEK	<a href="#">Yes</a>
384	<a href="#">MILES DAM</a>	TR-CHICKAHOMINY RIVER	<a href="#">Yes</a>
389	<a href="#">THREE CHOPT ESTATE DAM</a>	TR-UPHAM BROOK	<a href="#">Yes</a>
432	<a href="#">TOM BROOKS DAM</a>	TR-CHICKAHOMINY RIVER	<a href="#">Yes</a>
536	<a href="#">WACHTER DAM</a>	TR-TOTOPOTOMOY CREEK	<a href="#">Yes</a>

**Colonial Water Bird Survey** ( 23 records - displaying first 20 )
[View Map of All Query Results Colonial Water Bird Survey.](#)

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE *	Highest Tier **	
<a href="#">Western Shore, Quinton, Henrico</a>	1	May 5 2013	2			<a href="#">Yes</a>
<a href="#">Western Shore, Richmond, Hanover</a>	1	May 5 2013	2			<a href="#">Yes</a>
<a href="#">Western Shore, Roxbury, Charles City</a>	1	May 5 2013	2			<a href="#">Yes</a>
<a href="#">Western Shore, Yellow Tavern, Hanover</a>	1	May 5 2013	2			<a href="#">Yes</a>
<a href="#">Burnside Farms</a>	1	Jun 2 2003	1			<a href="#">Yes</a>
<a href="#">Ellerson Mill</a>	1	Jun 2 2003	2			<a href="#">Yes</a>
<a href="#">Lynn Grove</a>	2	Jun 2 2003	1			<a href="#">Yes</a>
<a href="#">Orapax Farm</a>	1	Jun 2 2003	1			<a href="#">Yes</a>
<a href="#">White Oak Swamp</a>	10	Jun 2 2003	2			<a href="#">Yes</a>
<a href="#">White Oak Swamp 2</a>	1	Jun 2 2003	1			<a href="#">Yes</a>
<a href="#">Chickahominy River at Bra</a>	1	Jun 1 1993	2			<a href="#">Yes</a>
<a href="#">Chickahominy River at Cha</a>	1	Jun 1 1993	1			<a href="#">Yes</a>

<a href="#">Chickahominy River at I-2</a>	1	Jun 1 1993	1	1		<a href="#">Yes</a>
<a href="#">Chickahominy River at Whi</a>	1	Jun 1 1993	1	2		<a href="#">Yes</a>
<a href="#">Chickahominy River South</a>	1	Jun 1 1993	1	1		<a href="#">Yes</a>
<a href="#">Hanover/Henrico/New Kent</a>	1	Jun 1 1993	1	1		<a href="#">Yes</a>
<a href="#">MECHANICSVILLE</a>	6	Jun 1 1991	6	2		<a href="#">Yes</a>
<a href="#">QUINTON</a>	3	Jun 1 1991	3	1		<a href="#">Yes</a>
<a href="#">RICHMOND I</a>	10	Jun 1 1991	10	1		<a href="#">Yes</a>
<a href="#">RICHMOND II</a>	7	Jun 1 1991	7	1		<a href="#">Yes</a>

Displayed 20 Colonial Water Bird Survey

**Selected 23 Observations**   [View all 23 Colonial Water Bird Survey.](#)

**Threatened and Endangered Waters**

N/A

**Managed Trout Streams**

N/A

**Bald Eagle Concentration Areas and Roosts**

N/A

**Bald Eagle Nests**   ( 1 records )

[View Map of All Query Results](#)  
[Bald Eagle Nests](#)

Nest	N Obs	Latest Date	DGIF Nest Status	View Map
<a href="#">HE9501</a>	16	Apr 23 2008	Unknown	<a href="#">Yes</a>

Displayed 1 Bald Eagle Nests

**Species Observations**   ( 664 records - displaying first 20 , 6  
Observations with Threatened or  
Endangered species )

[View Map of All Query Results](#)  
[Species Observations](#)

obsID	class	Date Observed	Observer	N Species	View Map
-------	-------	------------------	----------	-----------	-------------

				Different Species	Highest TE <sup>*</sup>	Highest Tier <sup>**</sup>	
<a href="#">50894</a>	SppObs	Mar 5 1997	John F Pagels, VCU, Dan Dombrowski, VCU	1	SE	I	<a href="#">Yes</a>
<a href="#">650319</a>	SppObs	May 23 2024	Mamie Gaspard	1	CC	III	<a href="#">Yes</a>
<a href="#">602360</a>	SppObs	Jun 27 2009	Donald; Mackler	1	CC	III	<a href="#">Yes</a>
<a href="#">6965</a>	SppObs	May 3 1994	Thomas J. Throp	1	CC	III	<a href="#">Yes</a>
<a href="#">364267</a>	SppObs	Jan 1 1900		1	CC	III	<a href="#">Yes</a>
<a href="#">364286</a>	SppObs	Jan 1 1900		1	CC	III	<a href="#">Yes</a>
<a href="#">86092</a>	SppObs	May 27 1996	T. P. Gunter	1		I	<a href="#">Yes</a>
<a href="#">600284</a>	SppObs	Aug 14 2009	Donald; Mackler	3		II	<a href="#">Yes</a>
<a href="#">605961</a>	SppObs	Feb 27 2009	Donald; Mackler	1		II	<a href="#">Yes</a>
<a href="#">615844</a>	SppObs	Oct 18 2012	Wayne; Starnes	2		III	<a href="#">Yes</a>
<a href="#">601089</a>	SppObs	Dec 4 2009	Donald; Mackler	11		III	<a href="#">Yes</a>
<a href="#">600592</a>	SppObs	Oct 27 2009	Donald; Mackler	3		III	<a href="#">Yes</a>
<a href="#">604628</a>	SppObs	Oct 20 2009	Donald; Mackler	3		III	<a href="#">Yes</a>
<a href="#">605366</a>	SppObs	Aug 14 2009	Donald; Mackler	1		III	<a href="#">Yes</a>
<a href="#">602166</a>	SppObs	Aug 13 2009	Donald; Mackler	1		III	<a href="#">Yes</a>
<a href="#">603379</a>	SppObs	Aug 13 2009	Donald; Mackler	1		III	<a href="#">Yes</a>
<a href="#">603878</a>	SppObs	Aug 12 2009	Donald; Mackler	1		III	<a href="#">Yes</a>
<a href="#">601001</a>	SppObs	Aug 12 2009	Donald; Mackler	1		III	<a href="#">Yes</a>
<a href="#">603471</a>	SppObs	Aug 12 2009	Donald; Mackler	1		III	<a href="#">Yes</a>
<a href="#">608001</a>	SppObs	Aug 11 2009	Donald; Mackler	1		III	<a href="#">Yes</a>

Displayed 20 Species Observations

Selected 664 Observations [View 500 \(system constraint\) Species Observations](#)

**Habitat Predicted for Aquatic WAP Tier I & II Species**

N/A

**Habitat Predicted for Terrestrial WAP Tier I & II Species**

N/A

**Virginia Breeding Bird Atlas Blocks** ( 14 records )
[View Map of All Query Results](#)  
[Virginia Breeding Bird Atlas Blocks](#)

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE *	Highest Tier **	
50106	<a href="#">Glen Allen, SE</a>	65		II	<a href="#">Yes</a>
53096	<a href="#">Quinton, SE</a>	66		III	<a href="#">Yes</a>
53095	<a href="#">Quinton, SW</a>	1			<a href="#">Yes</a>
51092	<a href="#">Richmond, NE</a>	2			<a href="#">Yes</a>
51091	<a href="#">Richmond, NW</a>	2			<a href="#">Yes</a>
53082	<a href="#">Roxbury, NE</a>	4			<a href="#">Yes</a>
53081	<a href="#">Roxbury, NW</a>	36		III	<a href="#">Yes</a>
53086	<a href="#">Roxbury, SE</a>	44		III	<a href="#">Yes</a>
52094	<a href="#">Seven Pines, CE</a>	2			<a href="#">Yes</a>
52093	<a href="#">Seven Pines, CW</a>	3			<a href="#">Yes</a>
52096	<a href="#">Seven Pines, SE</a>	66		II	<a href="#">Yes</a>
51104	<a href="#">Yellow Tavern, CE</a>	65		II	<a href="#">Yes</a>
51106	<a href="#">Yellow Tavern, SE</a>	54		II	<a href="#">Yes</a>
51105	<a href="#">Yellow Tavern, SW</a>	1			<a href="#">Yes</a>

**Public Holdings:** ( 1 names )

Name	Agency	Level
Richmond National Battlefield Park	National Park Service	Federal

**Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:**

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
036	<a href="#">Charles City</a>	394	FESE	I
085	<a href="#">Hanover</a>	384	FESE	I
087	<a href="#">Henrico</a>	389	FESE	I
127	<a href="#">New Kent</a>	413	FESE	I
760	<a href="#">Richmond City</a>	392	FESE	I

**USGS 7.5' Quadrangles:**

Glen Allen

Richmond

Yellow Tavern  
Dutch Gap  
Seven Pines  
Studley  
Roxbury  
Quinton  
Providence Forge

### USGS NRCS Watersheds in Virginia:

N/A

### USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
JL01	<a href="#">James River-Almond Creek</a>	64	SS	II
JL05	<a href="#">Turkey Island Creek</a>	66	SE	I
JL09	<a href="#">Herring Creek</a>	59	SE	I
JL16	<a href="#">Chickahominy River-Grassy Swamp Creek</a>	60	SE	I
JL17	<a href="#">Chickahominy River-Stony Run</a>	66	SE	I
JL18	<a href="#">Upham Brook</a>	54	SS	II
JL19	<a href="#">Chickahominy River-Powwhite Creek</a>	71	SE	I
JL20	<a href="#">Chickahominy River-Higgins Swamp</a>	71	SE	I
JL21	<a href="#">White Oak Swamp</a>	66	SE	I
JL22	<a href="#">Chickahominy River-Toe Ink Swamp</a>	72	SE	I
JL23	<a href="#">Chickahominy River-Rumley Marsh</a>	69	SE	I
YO30	<a href="#">Totopotomoy Creek</a>	55	SE	I
YO33	<a href="#">Black Creek</a>	63	SE	I
YO34	<a href="#">Pamunkey River-Montague Creek</a>	68	SE	I

Compiled on 2/3/2025, 3:08:32 PM. I3501138.0 report=all searchType= L dist= 3218 poi= 37.4489000 -77.1285699 siteDD= 37.4365600 -77.1577398;37.4797200 -77.1783998;37.4847300 -77.1806698;37.5318300 -77.2316298;37.5318800 -77.2316298;37.5465300 -77.2474698;37.5541500 -77.2700698;37.5620200 -77.2935398;37.5659000 -77.3055198;37.5690300 -77.3117098;37.5773500 -77.3280398;37.5856800 -77.3588798;37.5830500 -77.3669398;37.5807500 -77.3726498;37.5836700 -77.3784298;37.5940700 -77.3991898;37.6011700 -77.4055398;37.6096600 -77.4133298;37.6111900 -77.4132598;37.6242300 -77.4129398;37.6268000 -77.4140898;37.6367300 -77.4187598;37.6441600 -77.4217698;37.6540400 -77.4289798;37.6780000 -77.4465598;37.6810300 -77.4658198;37.6865800 -77.4796198;37.6881200 -77.4799898;37.6961700 -77.4829298;37.6972700 -77.4851398;37.6982600 -77.4844498;

PixelSize=256; Anadromous=0.023534; BBA=0.041115; BECAR=0.018362; Bats=0.01883; Buffer=0.032617; County=0.081889; HU6=0.064236; Impediments=0.021576; Init=0.067199; PublicLands=0.027362; Quad=0.038019; SppObs=0.466794; TEWaters=0.02614; TierReaches=0.026157; TierTerrestrial=0.020704; Total=1.179812; Tracking\_BOVA=0.176156; Trout=0.024355; huva=0.033882



# **VAFWIS - Department of Wildlife Resources**

37.53642 -77.37662

is the Search Point

Submit

Cancel

## **Search Point**

- ☒ **Change to "clicked" map point**  
☐ **Fixed at 37.53642 -77.37662**

## **Show Position Rings**

- ☐ Yes ☒ No

4 miles and 1 mile at the Search Point

## **Show Search Area**

- ☐ Yes ☒ No

2 Search distance miles buffer

Search Point is at map center

## **Base Map [Choices](#)**

Topography

## **Map Overlay [Choices](#)**

Current List:

## **Map Overlay Legend**

[back](#)

Map Click

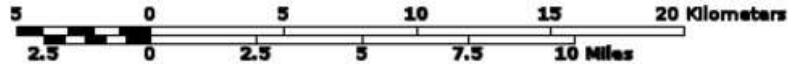
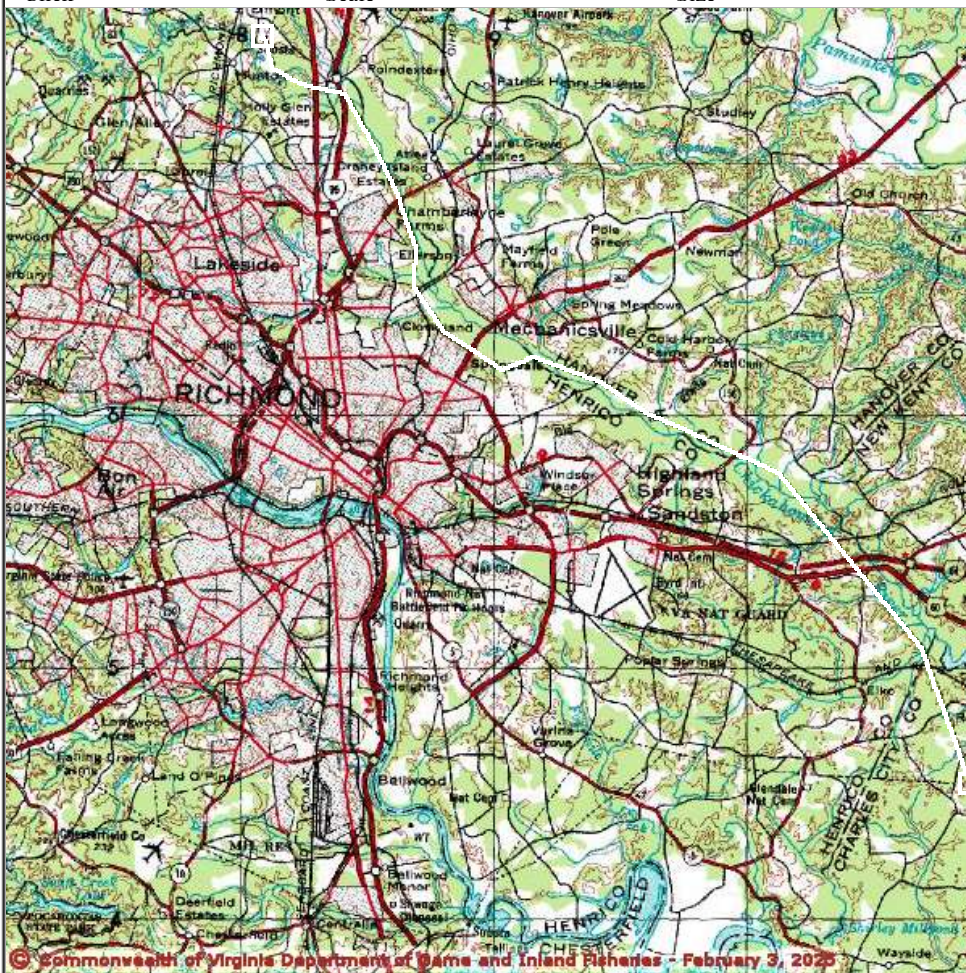
Pan

Map Scale

In Zoom Out

Screen Size

Small Size Big

[Help](#)


Point of Search 37.53642 -77.37662

Map Location 37.53642 -77.37662

- Select **Coordinate System**:
- ☐ Degrees, Minutes, Seconds Latitude - Longitude
  - ☒ Decimal Degrees Latitude - Longitude
  - ☐ Meters UTM NAD83 East North Zone
  - ☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:250,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 18 NAD 1983 with left 270818 and top 4176237. Pixel size is 60. . Coordinates displayed are decimal Degrees North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 38400 meters east to west by 38400 meters north to south for a total of 1474.5 square kilometers. The map display



# 1 Species Observations where Bat, Rafinesque's eastern big-eared (050034) observed

37,26,56.0 -77,07,42.8  
is the Search Point

## Show Position Rings

☒ Yes ☐ No

4 miles and 1 mile at the Search  
Point

## Show Search Area

☒ Yes ☐ No

2 Search distance miles  
buffer

Display Search Point is not  
at center at map center

## Base Map [Choices](#)

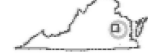
Topography

## Map Overlay [Choices](#)

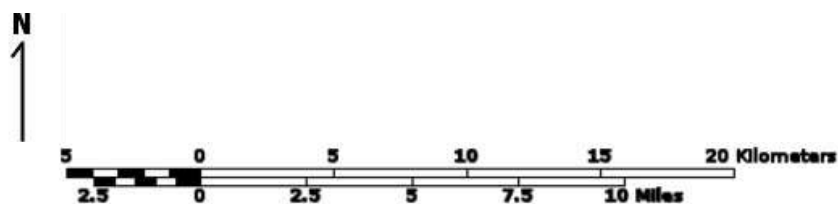
Current List: Position, Search,  
SppObs

## Map Overlay Legend

-  **Position Rings**  
4 miles and 1  
mile at the  
Search Point
-  **2 mile radius**  
Search Area
-  **Data**  
Observation Site



Map Click     Map Scale  Screen Size    [Help](#)



Point of Search 37,26,56.0 -77,07,42.8

Map Location 37,34,03.0 -77,19,16.0

Select **Coordinate System:** ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:250,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 18 NAD 1983 with left 275809 and top 4179565. Pixel size is 60. .  
Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed  
as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 38400 meters  
east to west by 38400 meters north to south for a total of 1474.5 square kilometers. The map



# **VAFWIS - Department of Wildlife Resources**

37,34,03.0 -77,19,16.0

is the Search Point

## **Search Point**

- ☒ **Change to "clicked" map point**  
☐ **Fixed at 37,34,03.0 -77,19,16.0**

## **Show Position Rings**

- ☐ Yes ☒ No

4 miles and 1 mile at the Search Point

## **Show Search Area**

- ☒ Yes ☐ No

2 Search distance miles buffer

Search Point is at map center

## **Base Map [Choices](#)**

Topography

## **Map Overlay [Choices](#)**

Current List: Anadromous, Search

## **Map Overlay Legend**

### **Anadromous Fish Reach**

 Confirmed

 Potential

 123 Impediment



 2 mile radius Search Area

[back](#)

Map Click

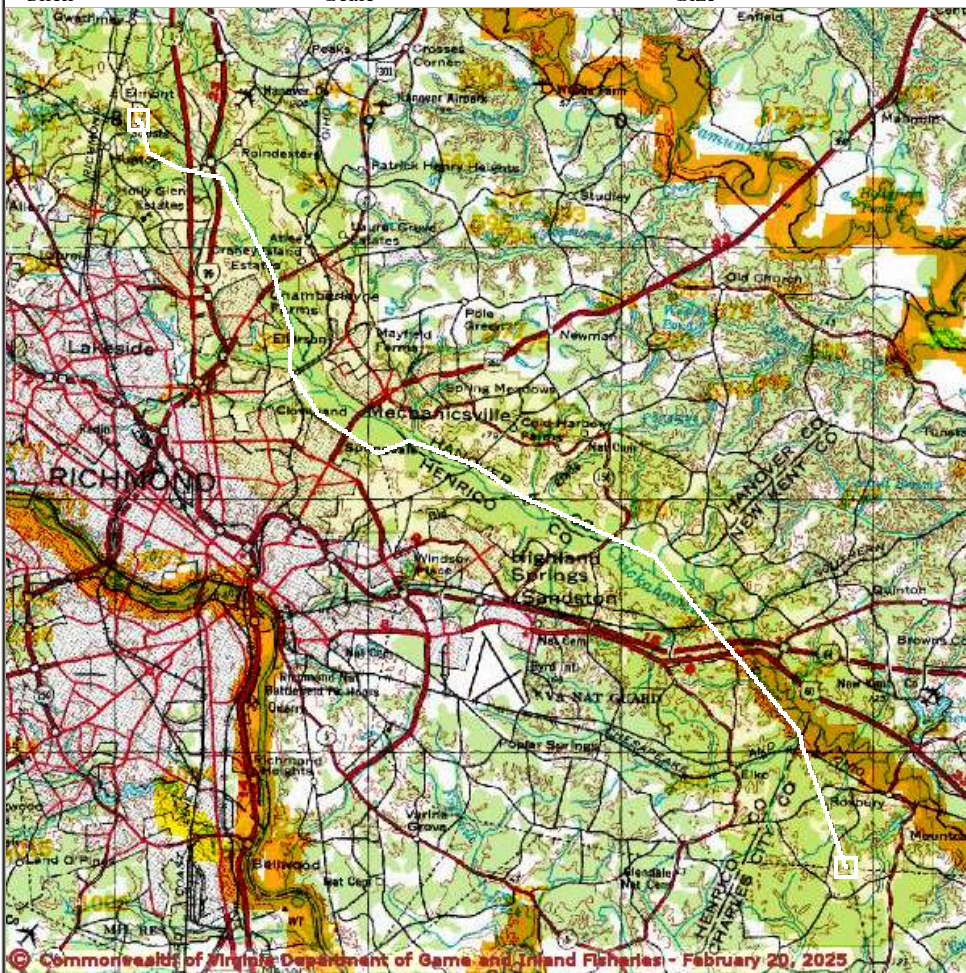
Map Scale

Screen Size

[Help](#)



N  
↑

5 0 5 10 15 20 Kilometers  
2.5 0 2.5 5 7.5 10 Miles

Point of Search 37,34,03.0 -77,19,16.0

Map Location 37,34,03.0 -77,19,16.0

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:250,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 18 NAD 1983 with left 275808 and top 4179565. Pixel size is 60. . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 38400 meters east to west by 38400 meters north to south for a total of 1474.5 square kilometers. The map

## Natural Heritage Resources

### Your Criteria

Federal Legal Status: Select All

State Legal Status: Select All

Watershed (8 digit HUC): 02080206 - Lower James River

Subwatershed (12 digit HUC): JL17 - Chickahominy River-Stony Run,JL18 - Upham Brook,JL19 - Chickahominy River-Powhite Creek,JL20 - Chickahominy River-Higgins Swamp,JL21 - White Oak Swamp,JL22 - Chickahominy River-Toe Ink Swamp

Search Run: 2/3/2025 15:17:29 PM

### Result Summary

Total Species returned: 5

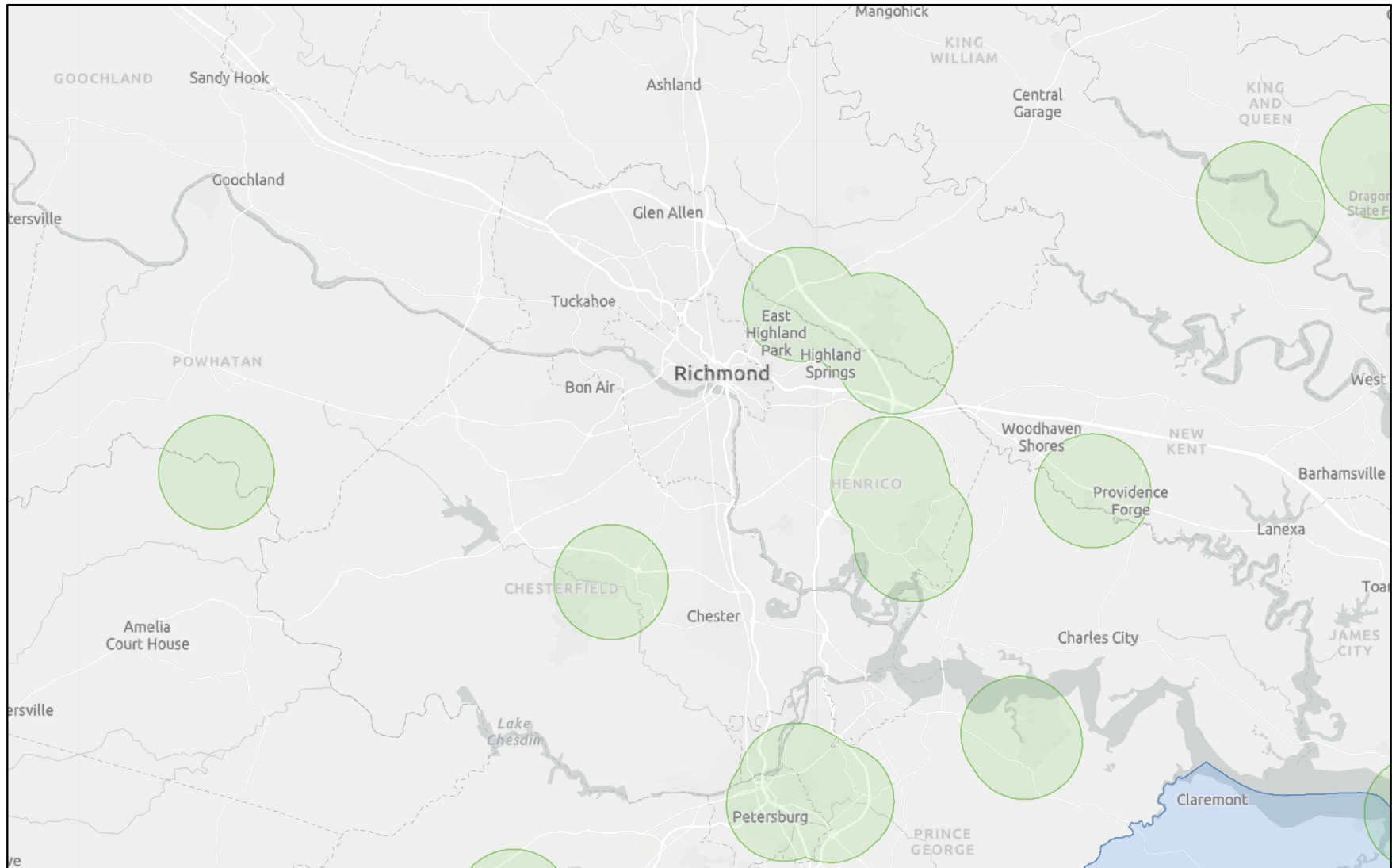
Total Communities returned: 0

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

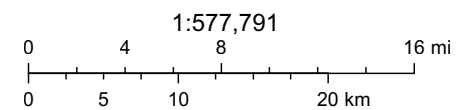
Common Name/Natural Community	Scientific Name	Scientific Name Linked	<a href="#">Global Conservation Status Rank</a>	<a href="#">State Conservation Status Rank</a>	<a href="#">Federal Legal Status</a>	<a href="#">State Legal Status</a>	Statewide Occurrences	Virginia Coastal Zone
<b>Lower James</b>								
Chickahominy River-Higgins Swamp								
MAMMALS								
Eastern Big-eared Bat	Corynorhinus rafinesquii macrotis	<a href="#">Corynorhinus rafinesquii macrotis</a>	G3G4T3	S2	None	LE	46	Y
Chickahominy River-Powhite Creek								
VASCULAR PLANTS								
Swamp-pink	Helonias bullata	<a href="#">Helonias bullata</a>	G3	S2S3	LT	LE	35	Y
Chickahominy River-Toe Ink Swamp								
VASCULAR PLANTS								
New Jersey Rush	Juncus caesariensis	<a href="#">Juncus caesariensis</a>	G2G3	S2	SOC	LT	13	Y
White Oak Swamp								
VASCULAR PLANTS								
Swamp-pink	Helonias bullata	<a href="#">Helonias bullata</a>	G3	S2S3	LT	LE	35	Y
New Jersey Rush	Juncus caesariensis	<a href="#">Juncus caesariensis</a>	G2G3	S2	SOC	LT	13	Y

# NLEB Locations and Roost Trees



2/3/2025, 3:27:33 PM

- NLEB Capture 3 Mile Buffer
- NLEB Year-Round Presence



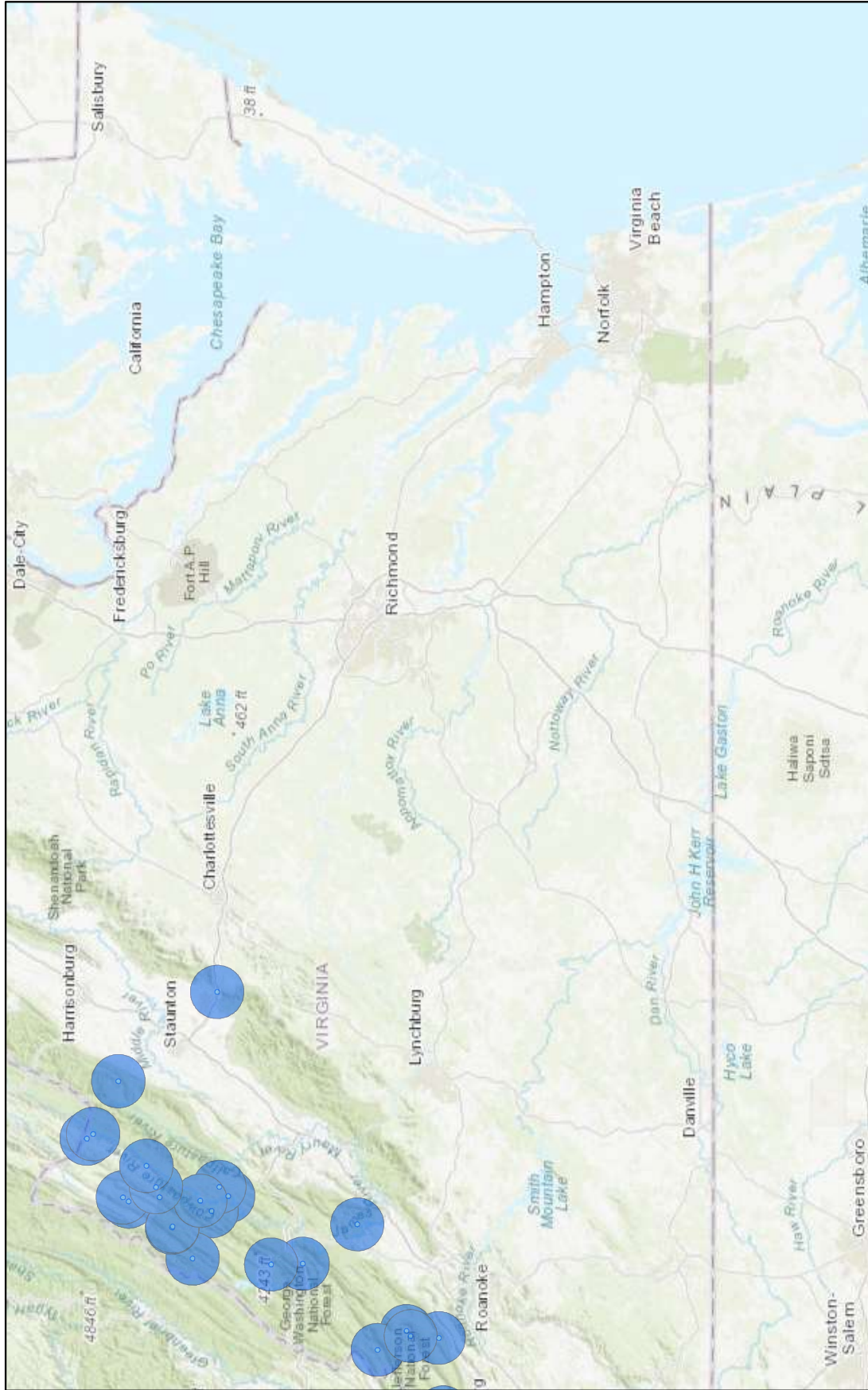
City of Richmond, VGIN, Esri, TomTom, Garmin, SafeGraph, FAO, METI/  
NASA, USGS, EPA, NPS, USFWS

VA Dept. Game & Inland Fisheries

City of Richmond, VGIN, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS | Virginia Geographic Information Network (VGIN), and the Census and Localities and Towns submitting data to the project | City of Richmond, VGIN, Esri,



# MYLU PESU Habitat



2/3/2025, 3:24:40 PM

- Tri-colored and Little Brown Hibernaculum Half Mile Buffer
- Tri-colored and Little Brown Hibernaculum 5.5 Mile Buffer

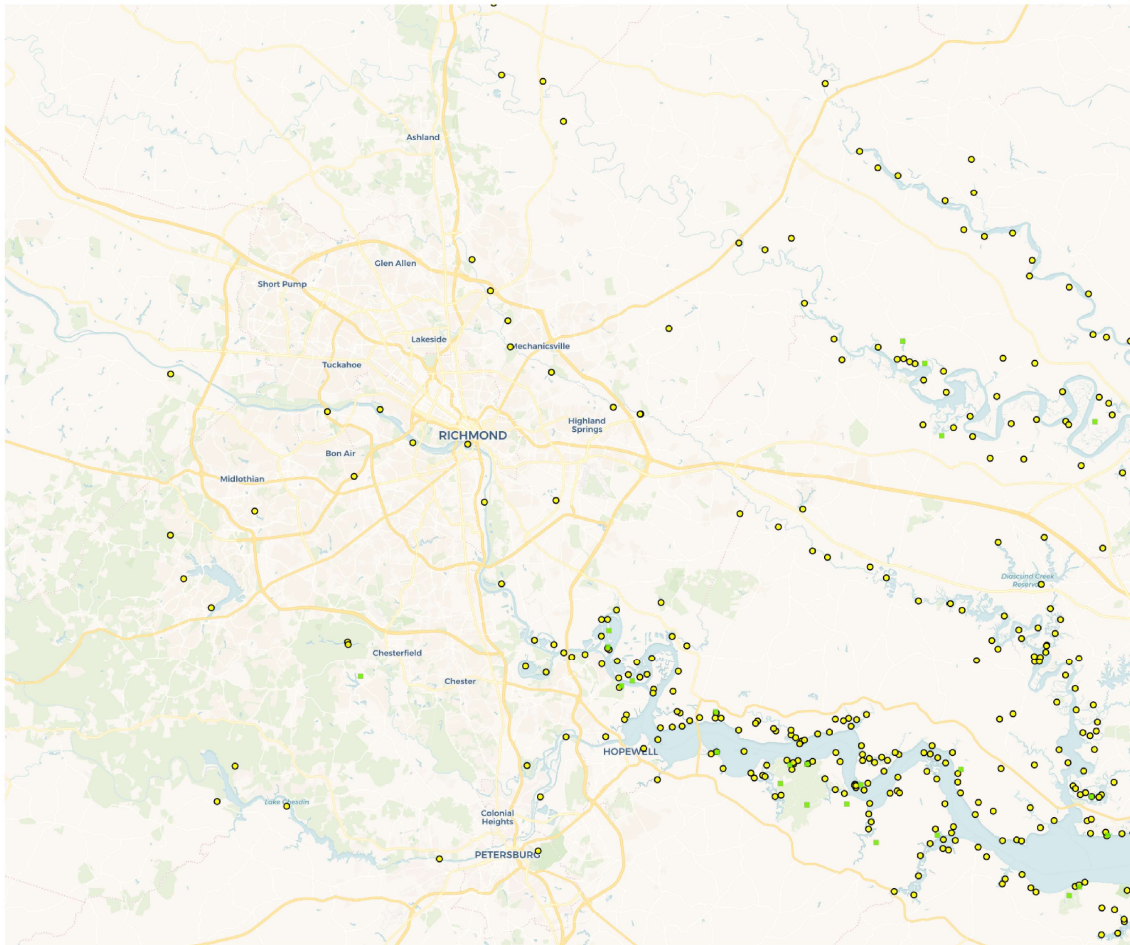
Esri, HERE, Garmin, FAO, USGS, EPA, NPS

Dept. Game and Inland Fisheries  
Esri, HERE, Garmin, FAO, USGS, EPA, NPS





# CCB Mapping Portal



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

**Map Center [longitude, latitude]:** [-77.33207702636719, 37.54403289174084]

**Map Link:**

<https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=Eagle+Roosts&zoom=11&lat=37.54403289174084&lng=-77.33207702636719&base=Street+Map+%28OSM%2FCarto%29>

**Report Generated On:** 02/03/2025

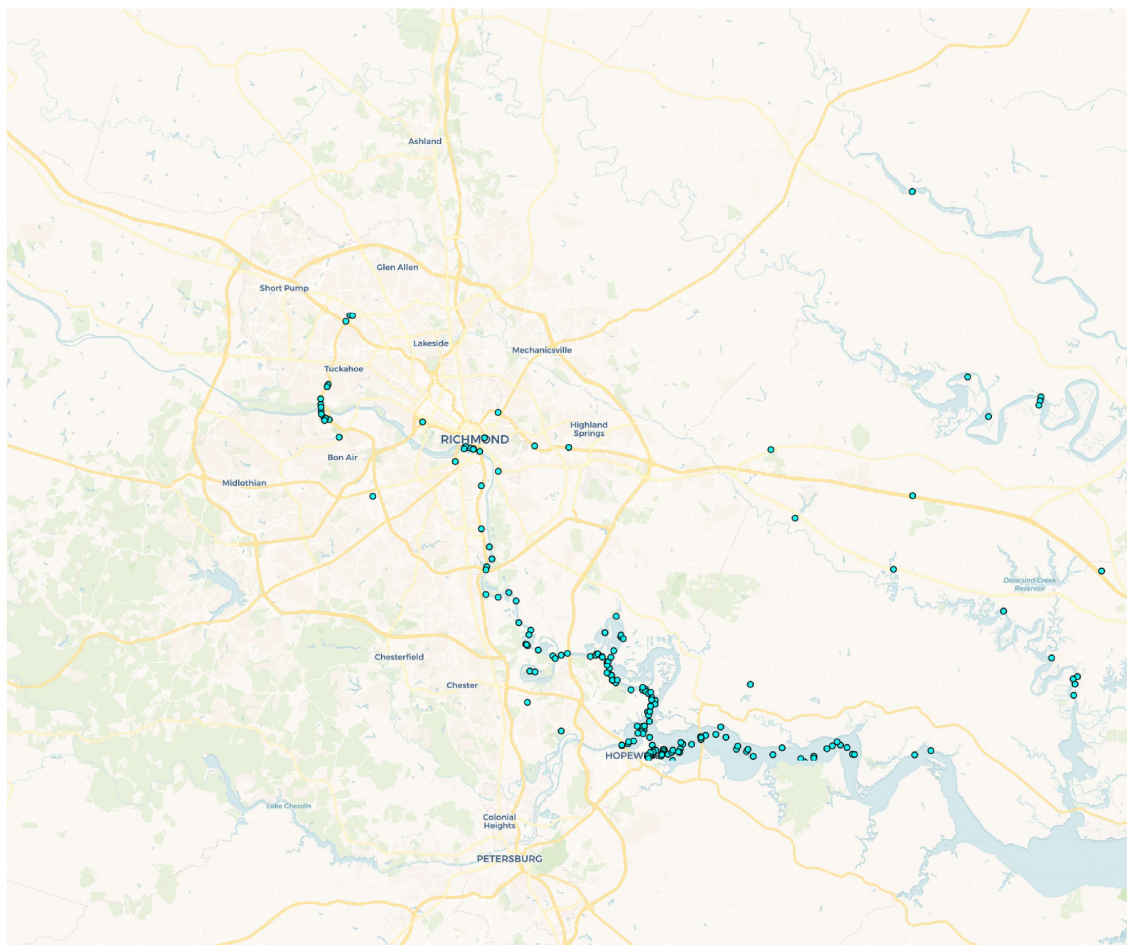
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Report generated by [The Center for Conservation Biology Mapping Portal](#).

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



# CCB Mapping Portal



**Layers:** OspreyWatch Nests

**Map Center [longitude, latitude]:** [-77.33207702636719, 37.54403289174084]

**Map Link:**

<https://ccbbirds.org/maps/#layer=OspreyWatch+Nests&zoom=11&lat=37.54403289174084&lng=-77.33207702636719&base=Street+Map+%28OSM%2FCarto%29>

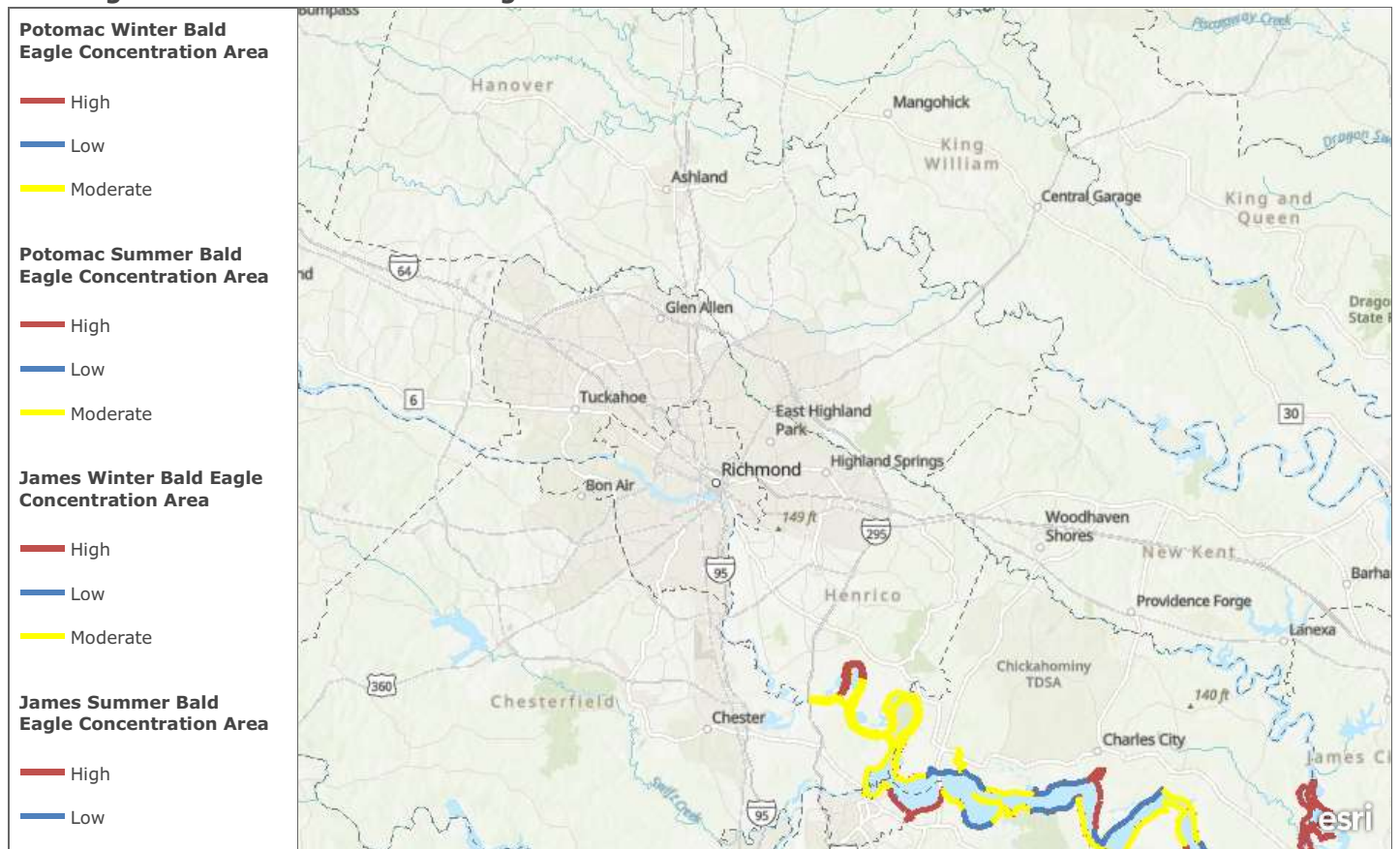
**Report Generated On:** 02/03/2025

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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)

## Bald Eagle Concentration Areas in Virginia

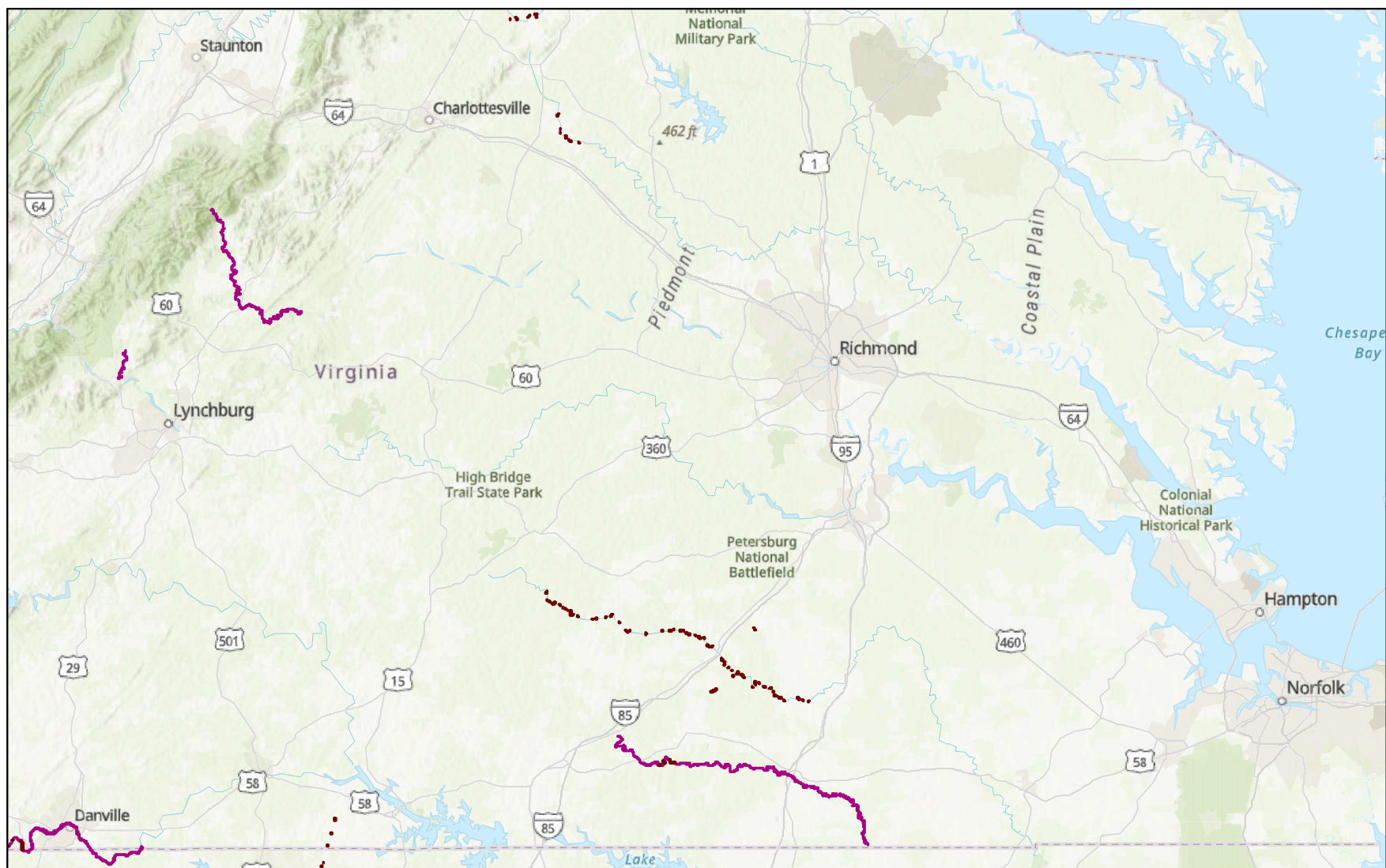


Map with bald eagle summer and winter concentration areas throughout Virginia

Esri, CGIAR, USGS | VGIN, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS



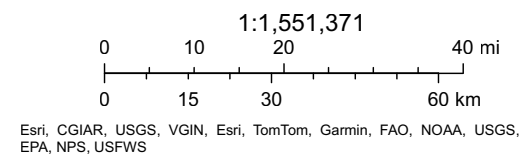
# Virginia Critical Habitat



2/4/2025

- Critical Habitat - Polygon Features - Final
- Critical Habitat - Polygon Features - Proposed

World Hillshade



Stefanie K. Taillon  
Secretary of Natural and Historic Resources

Matthew S. Wells  
Director

Andrew W. Smith  
Chief Deputy Director



**COMMONWEALTH of VIRGINIA**  
DEPARTMENT OF CONSERVATION AND RECREATION

Frank N. Stovall  
Deputy Director  
for Operations

Darryl Glover  
Deputy Director for  
Dam Safety,  
Floodplain Management and  
Soil and Water Conservation

Laura Ellis  
Deputy Director for  
Administration and Finance

April 8, 2025

Andrea Thornton  
C2 Environmental, Inc.  
11846 Rock Landing Drive, Suite A  
Newport News, VA 23606

Re: Chickahominy-Elmont Line 557 Rebuild and New Future kV Lines

Dear Ms. Thornton:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

**Yellow Tavern Quadrangle, Richmond Quadrangle**

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

**Seven Pines Quadrangle**

According to the information in our files, the Chickahominy River - I295 To Grapevine Stream Conservation Site (SCS) is located within the project area. SCSs encompass stream/river reaches, waterbodies, and terrestrial contributing areas containing or associated with aquatic or semi-aquatic resources, including upstream and downstream reaches and tributaries up to 3-km stream distance from the aquatic resources. The size and dimensions of a SCS are based on the hydrology of the waterway and surrounding landscape, taking into consideration dam locations and whether the waterway is tidal. SCS's are given a biodiversity significance ranking (B-rank) based on the rarity, quality, and number of element occurrences they contain. The Chickahominy River - I295 To Grapevine SCS has been assigned a B-rank of B2, which represents a site of very high significance. The natural heritage resources associated with this SCS are:

Aquatic Natural Community (NC-Lower James Fifth Order Stream)	G1G2/S1S2/NL/NL
Aquatic Natural Community (NC-Lower James Fifth Order Stream)	G1G2/S1S2/NL/NL

The documented Aquatic Natural Communities are based on Virginia Commonwealth University's **INSTAR** (*Interactive Stream Assessment Resource*) database which includes over 2,000 aquatic (stream and river) collections statewide for fish and macroinvertebrate. These data represent fish and macroinvertebrate

assemblages, instream habitat, and stream health assessments. The associated Aquatic Natural Communities are significant on multiple levels. First, these streams are a grade A, per the VCU-Center for Environmental Sciences (CES), indicating their relative regional significance, considering their aquatic community composition and the present-day conditions of other streams in the region. These stream reaches also hold “Exceptional” stream designations per the INSTAR Virtual Stream Assessment (VSS) score. This score assesses the similarity of these streams to ideal stream conditions of biology and habitat for this region. Lastly, these streams contribute to high Biological Integrity at the watershed level (6<sup>th</sup> order) based on number of native/non-native, pollution-tolerant/intolerant and rare, threatened or endangered fish and macroinvertebrate species present. Threats to the significant Aquatic Natural Community and the surrounding watershed include water quality degradation related to point and non-point pollution, water withdrawal and introduction of non-native species. To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations, establishment/enhancement of riparian buffers with native plant species and maintaining natural stream flow.

Please note this project is within a section of the Chickahominy River that has been designated as a scenic river in the state of Virginia. Please visit <https://www.dcr.virginia.gov/recreational-planning/srmain> for more information about the Virginia Scenic Rivers Program.

### **Quinton Quadrangle**

Biotics documents the presence of natural heritage resources within the project boundary including a 100ft buffer. However, due to the scope of the activity we do not anticipate that this project will adversely impact these natural heritage resources.

### **Roxbury Quadrangle**

According to the information in our files, the Possum Run Seep Conservation Site is located within the project area, including a 100 foot buffer (Figure 1). Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element’s conservation. Conservation sites are given a biodiversity significance ranking (B-rank) based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Possum Run Seep Conservation Site has been assigned a B-rank of B3, which represents a site of high significance. The natural heritage resource associated with this site is:

*Juncus caesariensis*

New Jersey rush

G2G3/S2/SOC/LT

New Jersey rush is a sedge-like herb with a rough surface and narrow leaves, inhabits acidic hardwood swamps, seeps, swales or pond margins. These sites usually contain a persistent seepage of groundwater or perennially reliable flow (Ware, 1991). It has also been documented in seepages within such disturbed areas as powerline rights-of-way. New Jersey rush is restricted to isolated occurrences in the coastal plain of Virginia (TNC et. al., 1999). Threats to this plant include disruptions in its hydrological regime, such as draining or filling wetlands and flooding by beavers, invasions by competitors resulting from clear-cutting of the overstory (Ware, 1991) and succession of its habitat to woody vegetation (Nature Serve 2011). Surveys for New Jersey rush should be conducted during the fruiting period of this plant from August – October.

Please note that this species is listed as threatened by the Virginia Department of Agriculture and Consumer Services (VDACS). It is also classified as a species of concern by the United States Fish and Wildlife Service (USFWS); however, this designation has no official legal status.

To minimize adverse impacts to the documented natural heritage resources within the powerline right-of-way, DCR provides the following recommendations:

- Flagging or fencing the documented populations of rare plants so that direct impacts can be avoided during the transmission line rebuild.
- Avoidance of equipment staging, vehicular traffic and other activities within these sensitive areas.
- Ensure that ROW restoration and maintenance practices include appropriate revegetation using native species in a mix of grasses and forbs to the extent that it is consistent with erosion and sediment control requirements, robust monitoring and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur.
- Limiting ground disturbance within the ROW to the greatest extent possible.

The release of natural heritage data may threaten natural heritage resources. The attached location map of the documented occurrence of a natural heritage resource is for internal use only to avoid potential impacts in the design and/or construction/operations of the project. This locational information is not to be included in public documents and/or shared externally.

#### **All Quads**

DCR recommends the development and implementation of an invasive species plan to be included as part of the maintenance practices for the right-of-way (ROW). The invasive species plan should include an invasive species inventory for the project area based on the current DCR Invasive Species List (<https://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2024.pdf>) and methods for treating the invasives. DCR also recommends the ROW restoration and maintenance practices planned include appropriate revegetation using native species in a mix of grasses and forbs to the extent that it is consistent with erosion and sediment control requirements, robust monitoring, and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of \$485.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24<sup>th</sup> Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not

documented in this letter. Their database may be accessed at <https://svcgis.dwr.virginia.gov/fwis/> or contact Lee Brann at [Lee.Brann@dwr.virginia.gov](mailto:Lee.Brann@dwr.virginia.gov).

Should you have any questions or concerns, please contact me at 804-225-2429. Thank you for the opportunity to comment on this project.

Sincerely,



Tyler Meader  
Natural Heritage Locality Liaison

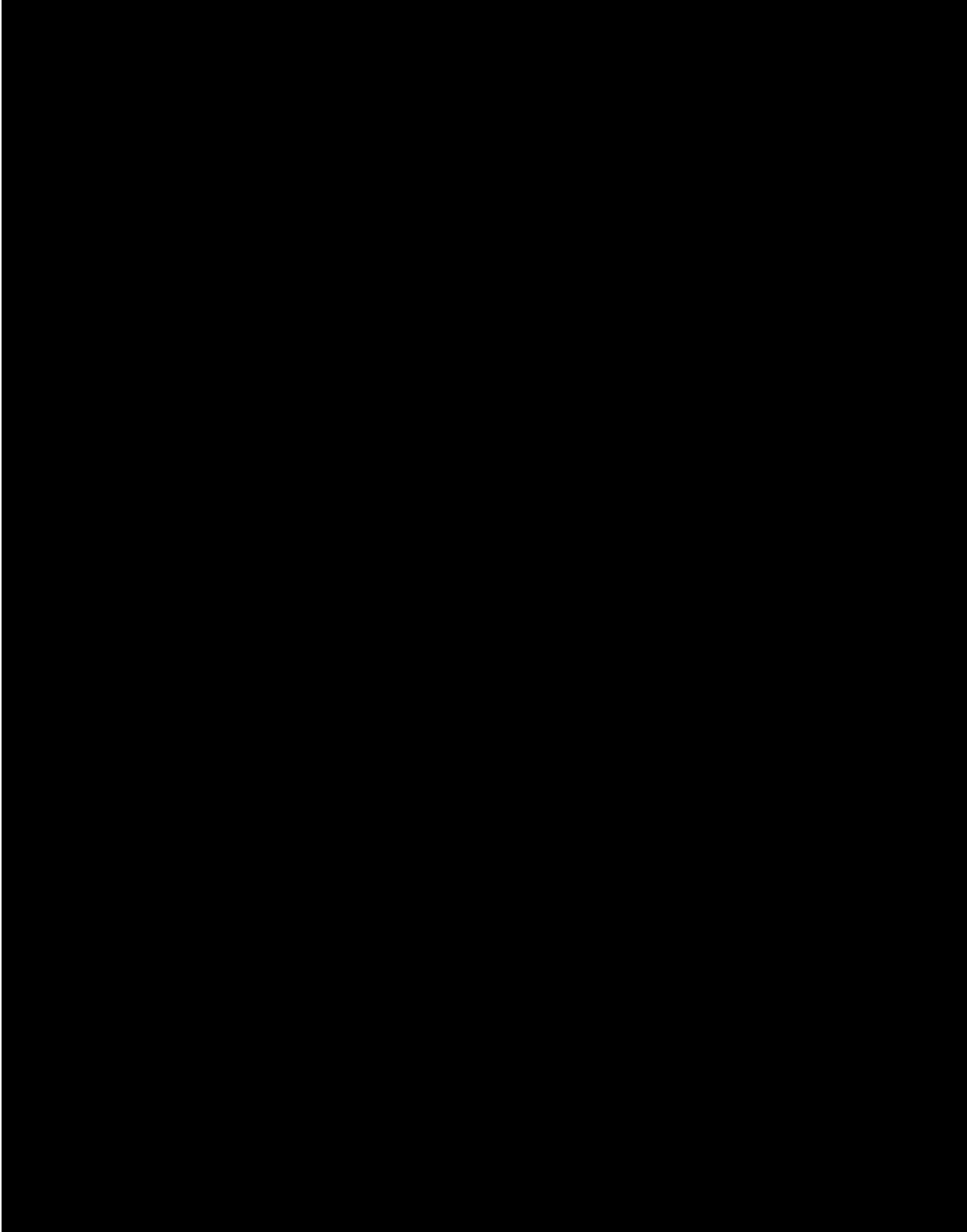


## Literature Cited

NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: July 25, 2011 ).

Ware, D.M.E. 1991. New Jersey rush. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Figure 1. New Jersey Rush Occurrence within transmission line right-of-way





*Commonwealth of Virginia*

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY*

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Travis A. Voyles  
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus  
Director  
(804) 698-4020

February 27, 2024

Dominion Energy  
120 Tredegar Street  
Richmond, VA 23219  
Attn: Elizabeth L. Hester

Transmitted Via Email: (Elizabeth.l.hester@dominionenergy.com)

Re: Dominion Energy (Electric Transmission) - AS&S - Program Renewal – 2024/2025

Dear Ms. Hester:

The Virginia Department of Environmental Quality (DEQ) hereby approves the Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities for Dominion Energy's document dated "February 2024". This coverage is effective from February 27, 2024, to February 26, 2025.

To ensure compliance with approved specifications, the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act, DEQ staff will conduct random site inspections, respond to complaints, and provide on-site technical assistance with specific erosion and sediment control and stormwater management measures and plan implementation.

Please note that your approved Annual Standards and Specifications include the following requirements:

1. Variance, exception, and deviation requests must be submitted to DEQ separately from this Annual Standards and Specifications' submission. DEQ may require project-specific plans associated with such requests to be submitted for review and approval.
2. The following information must be submitted to DEQ for each project at least two weeks in advance of the commencement of regulated land-disturbing activities. Notifications shall be sent by email to: [StandardsandSpecs@deq.virginia.gov](mailto:StandardsandSpecs@deq.virginia.gov)
  - a. Project name or project number;
  - b. Project location (including nearest intersection, latitude and longitude, access point);
  - c. On-site project manager name and contact info;

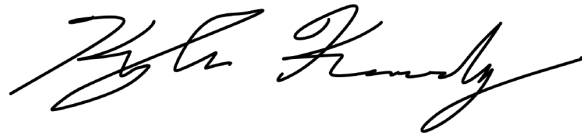
February 27, 2024  
Page 2 of 2

- d. Responsible Land Disturber (RLD) name and contact info;
  - e. Project description;
  - f. Acreage of disturbance for project;
  - g. Project start and finish date; and
  - h. Any variances/exceptions/deviations associated with this project.
3. Project tracking of all regulated land disturbing activities (LDA) must be submitted to DEQ once per 6-month period. Project tracking records shall contain the same information as required in the two week e-notifications for each regulated LDA.
  4. Erosion & Sediment Control and Stormwater Management plans must be reviewed by DEQ-certified Plan Reviewers. Dominion Energy, as the AS&S holder, retains the authority to approve plans and must do so in writing. Should an AS&S holder contract out to a third-party to fulfill the plan review function, the third-party Plan Reviewer may recommend approval of the plan, but final approval must come from the AS&S holder.

To ensure an efficient information exchange and response to inquiries, DEQ Central Office is your primary point of contact. Central Office staff will coordinate with our Regional Office staff as appropriate

Please contact Abigail Snider at 804-486-0365 or [Abigail.Snider@deq.virginia.gov](mailto:Abigail.Snider@deq.virginia.gov) if you have any questions about this letter.

Respectfully,

A handwritten signature in black ink, appearing to read "Kyle Kennedy", with a stylized, flowing script.

Kyle Kennedy, Manager  
Office of Stormwater Management

Cc: Larry Gavan, DEQ-CO  
Antony Angueira, DEQ-CO

**REPORT >**

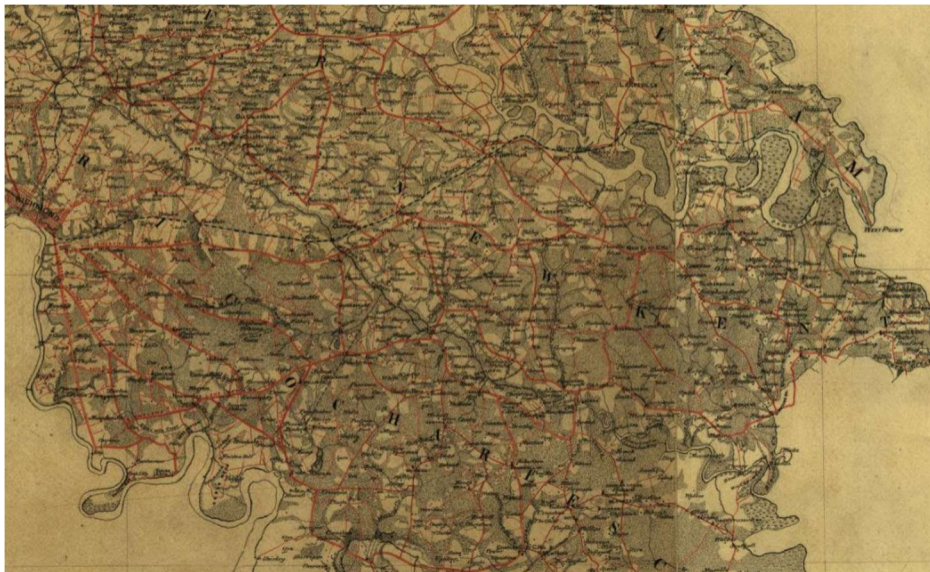
**Pre-Application Analysis  
of Cultural Resources for the Chickahominy-Elmont  
Line 557 500kV Rebuild Project**

**LOCATION >** Charles City, Hanover, and Henrico Counties,  
Virginia

**DATE >** APRIL 2025

**PREPARED FOR >**

Dominion Energy



**PREPARED BY >**

Dutton + Associates, a  
Timmons Group Company

**PROJECT REVIEW # >**

**Dutton + Associates**  
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT



**SCC Pre-Application Analysis  
of Cultural Resources for the  
Chickahominy-Elmont Line 557  
500kV Rebuild Project**

**Charles City, Hanover, and Henrico Counties, Virginia**

***PREPARED FOR:***

DOMINION ENERGY  
5000 DOMINION BLVD. 3SW  
GLEN ALLEN, VIRGINIA 23060  
804. 310.9658

***PREPARED BY:***

DUTTON + ASSOCIATES, A TIMMONS GROUP COMPANY  
1115 CROWDER DRIVE  
MIDLOTHIAN, VIRGINIA 23236  
804.644.8290

***PRINCIPAL INVESTIGATOR:***

Robert J. Taylor, Jr. M.A.

**April 2025**

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**ABSTRACT**

*From December 2024 to April 2025, Dutton + Associates, a Timmons Group company (D+A), completed a Pre-Application Analysis (analysis) of cultural resources for the Chickahominy-Elmont Line 557 500kV Rebuild Project in Henrico, Hanover, Charles City County, and the City of Richmond, Virginia. The analysis was performed for Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company) in support of an application to the State Corporation Commission (SCC) for a Certificate of Public Convenience and Necessity (CPCN). The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia (August 2017).*

*The Chickahominy-Elmont project involves the rebuild of approximately 27.7 miles of existing 500kV transmission line extending generally from the Chickahominy substation in Charles City County to the Elmont substation in Hanover County. The line was constructed in 1971 and the project is needed to rebuild it to current standards based on the Company's End of Life Criteria and in order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation Reliability Standards.*

*The existing transmission line is suspended from steel lattice structures with a weathering finish that average 119 feet in height and are centered within a variable-width right-of-way (ROW) that along many segments is shared by additional transmission lines. As a part of the rebuild, the existing transmission structures will be replaced generally on a one-to-one basis in the same location with 5/2 steel H-frame structures, and a limited number of 3-pole structures, all with a weathering finish and an average height of 145 feet. All project improvements will take place within existing ROW and no new permanent ROW will be necessary.*

*The background research conducted as part of this analysis was consistent with VDHR guidance and designed to identify all previously recorded National Historic Landmarks (NHL) located within 1.5-miles of the proposed project or closer, all National Register of Historic Places (NRHP)-listed properties, battlefields, and historic landscapes located within 1-mile of the proposed project or closer, all historic properties considered eligible for listing in the NRHP located within 0.5-miles of the proposed project or closer, and all archaeological sites located directly within the proposed project area. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each historic property within the defined tiers, a review of existing documentation and a field reconnaissance was undertaken to assess each property's significant character-defining features, as well as the character of its current setting. Following identification of historic properties, D+A assessed the potential for impacts to any identified properties as a result of the proposed project. Specific attention was given to determining whether or not construction related to the project could introduce new visual elements into the property's viewshed or directly impact the property through construction, which would either directly or*

*indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP.*

*Review of the VDHR Virginia Cultural Resource Information System (VCRIS) inventory records revealed a total of six-hundred-fifty-one (651) previously recorded architectural resources are located within 1.5 mile of the project alignment. Of these, there are no (0) NHLs located within 1.5 mile of the proposed project or closer, five (5) NRHP-listed properties and eleven (11) battlefields located within 1.0 mile or closer of the project, and five (5) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the project. One (1) of the NRHP-listed resources, seven (7) of the battlefields, and two (2) of the NRHP-eligible resources are directly crossed by the project alignment.*

*Assessment of impacts to architectural resources and battlefields found that in general, the existing transmission line to be rebuilt as part of this project is not visible from most vantage points within and near the historic properties, and where it is visible, views are limited to portions of one or two structures above treelines with the exception of where road crossings allow more open views of structures up and down the ROW. The project alignment generally extends through a low area bordering the Chickahominy River while development, and most historic properties, are situated on the more elevated landforms to each side. Because much of the Chickahominy River is compromised a wide, swampy and wooded area, the project corridor is often bordered by thick woods. This vegetation inhibits views of the existing transmission line from most vantages, and despite the increase in height of replacement structures, it is anticipated that most will remain behind and beneath the intervening vegetation due to the angle of view. This is coupled with extensive and ongoing suburban development in the surrounding areas that provides further screening from many of the historic properties.*

*Due to the numerous Civil War battlefields in the area that are crossed and in proximity to the project, including a number of areas that are maintained by the National Park Service (NPS) as part of the Richmond National Battlefield Park, particular attention was given to the potential visibility from these areas. Coordination with NPS staff took place prior to conducting photo simulations in order to select the most representative and/or preferred vantage points. The effort demonstrated that the existing transmission line is mostly to completely screened from the NPS tracts of land with the exception of several structures that are visible above the treeline in the distance from several discrete vantage points within the Gaines Mill/Watt House tract. With the increase in height, the visible structures will rise slightly higher above the treeline, however, it is not anticipated to result in the visibility of any new or additional structures, nor will the visible structures be visible from any wider of an area. As project engineering is still preliminary, including structure locations, these impact assessments are subject to change. However, based on project data current at the time of this analysis, **it is D+A's opinion that there will be no more than a minimal impact to any historic properties or battlefields within the study tiers for the Chickahominy-Elmont Rebuild Project.***

***Potential impacts summary for architectural resources.***

<b><i>VDHR #</i></b>	<b><i>Resource Name, Address</i></b>	<b><i>NRHP-Status</i></b>	<b><i>Distance from Project</i></b>	<b><i>Recommended Impact</i></b>
007-5513	Chesapeake and Ohio Railroad (Historic), Louisa Railroad	NRHP-Eligible	Adjacent to ROW	Minimal Impact

<b>VDHR #</b>	<b>Resource Name, Address</b>	<b>NRHP-Status</b>	<b>Distance from Project</b>	<b>Recommended Impact</b>
	<i>(Historic), Virginia Central Railroad (Historic)</i>			
018-5004	<i>Nance's Shop (Historic), Saint Mary's Church Battlefield (Current Name), Samaria Church (Historic)</i>	<i>Battlefield</i>	<i>Directly Crossed by Chickahominy Substation</i>	<i>Minimal Impact</i>
042-0120	<i>Hogan House (Current), House, 6279 Powhite Farm Drive (Function/Location), Selwyn (Historic/Current)</i>	<i>NRHP-Listed</i>	<i>~0.32 Mile</i>	<i>No Impact</i>
042-0137	<i>Oakley Hill (NRHP Listing)</i>	<i>NRHP-Listed</i>	<i>~0.92 Mile</i>	<i>No Impact</i>
042-5017	<i>Cold Harbor Battlefield (Current Name), Second Cold Harbor (Historic)</i>	<i>Battlefield</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>
042-5018	<i>First Cold Harbor Battlefield (Historic), Gaines' Mill Battlefield (Current Name)</i>	<i>Battlefield</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>
042-5022	<i>Battle of Bethesda Church (Historic), Battle of Crumps Creek (Historic), Battle of Hanover town (Historic), Battle of Shady Grove Road (Historic), Totopotomoy Creek Battlefield (Current Name)</i>	<i>Battlefield</i>	<i>~0.90 Mile</i>	<i>No Impact</i>
042-5479	<i>Beaver Dam Creek Battlefield (Current Name)</i>	<i>Battlefield</i>	<i>Directly Crossed</i>	<i>No Impact</i>
042-5509	<i>Ashland UDC Jefferson Davis Highway Marker (NRHP Listing), Lee Chapter UDC Jefferson Davis Highway Commemorative Marker (Current Name), UDC Commemorative Highway Marker, Jefferson Davis Highway (Function/Location)</i>	<i>NRHP-Listed</i>	<i>~0.59 Mile</i>	<i>No Impact</i>
043-0033	<i>Richmond National Battlefield Park (NRHP Listing)</i>	<i>NRHP-Listed</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>
043-0175	<i>Ravenswood (Current)</i>	<i>NRHP-Eligible</i>	<i>~0.30 Mile</i>	<i>No Impact</i>
043-0307	<i>Battle of Chaffin's Farm, New Market Road (Historic/Location), New Market Heights Battlefield (Historic/Current)</i>	<i>Battlefield</i>	<i>~0.33 Mile</i>	<i>No Impact</i>
043-0308	<i>Savage Station Battlefield (Historic/Current)</i>	<i>Battlefield</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>
043-0800	<i>Antique Carousel, Virginia Center Commons</i>	<i>NRHP-Eligible</i>	<i>~0.15 Mile</i>	<i>Demolished (No Impact)</i>
043-5077	<i>Frazier's Farm (Historic), Glendale Battlefield (Current Name), Glendale Battlefield (Historic), Nelson's Farm (Historic)</i>	<i>Battlefield</i>	<i>~0.48 Mile</i>	<i>No Impact</i>

<i>VDHR #</i>	<i>Resource Name, Address</i>	<i>NRHP-Status</i>	<i>Distance from Project</i>	<i>Recommended Impact</i>
043-5081	<i>Fair Oaks (Historic), Seven Pines Battlefield (Historic)</i>	<i>Battlefield</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>
043-5108	<i>Yellow Tavern Battlefield (Historic)</i>	<i>Battlefield</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>
043-5273	<i>Battle of Garnett's and Golding's Farm (Historic/Location)</i>	<i>Battlefield</i>	<i>~0.06 Mile</i>	<i>Minimal Impact</i>
043-5347	<i>Richmond-Ashland Trolley Line (Historic)</i>	<i>NRHP-Eligible</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>
043-6408	<i>Indian Springs Farm Site 44HE1065 (NRHP Listing), Wilson Site (Historic)</i>	<i>NRHP-Listed</i>	<i>~0.04 Mile</i>	<i>No Impact</i>
121-5134	<i>Chesapeake and Ohio Railroad (Historic), CSX Railroad (Current Name)</i>	<i>NRHP-Eligible</i>	<i>Directly Crossed</i>	<i>Minimal Impact</i>

*With regards to archaeology, portions of the project area have been subject to previous Phase I identification survey, however, these are primarily limited to linear corridors associated with utility or infrastructure projects crossing the project ROW. As a result of these prior surveys, discrete lengths of the overall project ROW have been subject to survey although much of the ROW remains unsurveyed. The surveys that have been conducted have resulted in the identification of thirty-one (31) previously recorded archaeological sites within the project ROW. Of these, seven (7) have been determined eligible or potentially eligible for listing in the NRHP, eight (8) have been determined not eligible for listing, and the others have not been formally evaluated. Formal archaeological fieldwork and investigations were not conducted as part of this effort so the existing conditions of the sites are unknown and project engineering is also still preliminary so the final project alignment, structure locations, and extent of grading and limits of disturbance are subject to change. Further investigation and analysis will be needed to assess impacts to NRHP-eligible sites. **It is therefore D+A's recommendation that any portion of the project area that has not been subject to accepted cultural resource survey be investigated to identify unrecorded sites and previously recorded sites that are considered eligible or unevaluated be assessed for eligibility. Any sites found to be eligible for listing in the NRHP should be assessed for project impacts as additional project construction details become available.***

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## 1. INTRODUCTION

From December 2024 to April 2025, Dutton + Associates, a Timmons Group company (D+A), completed a Pre-Application Analysis (analysis) of cultural resources for the Chickahominy-Elmont Line 557 500kV Rebuild Project in Charles City, Hanover, and Henrico Counties, Virginia (Figure 1-1). The analysis was performed for Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company) in support of an application to the State Corporation Commission (SCC) for a Certificate of Public Convenience and Necessity (CPCN). The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation *Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia* (August 2017).

This analysis was performed at a level that meets the purpose and intent of VDHR's and the SCC's guidance based upon project data and engineering available at the time of the study. It provides information on the presence of previously recorded National Historic Landmark (NHL) properties located within a 1.5-mile buffer area established around the project, properties listed on the National Register of Historic Places (NRHP), battlefields, and historic landscapes located within a 1-mile buffer around the project, properties previously determined eligible for listing in the NRHP located within a 0.5-mile buffer area around the project, and previously identified archaeological resources directly within the project area. This analysis will not satisfy Section 106 identification and evaluation requirements in the event federal permits or licenses are needed; however, it can be used as a planning document to assist in making decisions under Section 106 as to whether further cultural resource identification efforts may be warranted.

This report contains a research design which describes the scope and methodology of the analysis, discussion of previously identified historic properties, and an assessment of potential impacts. D+A Senior Architectural Historian Robert J. Taylor, Jr. M.A. served as Principal Investigator and oversaw the general course of the project and supervised all aspects of the work. Copies of all notes, maps, correspondence, and historical research materials are on file at the D+A main office in Midlothian, Virginia.

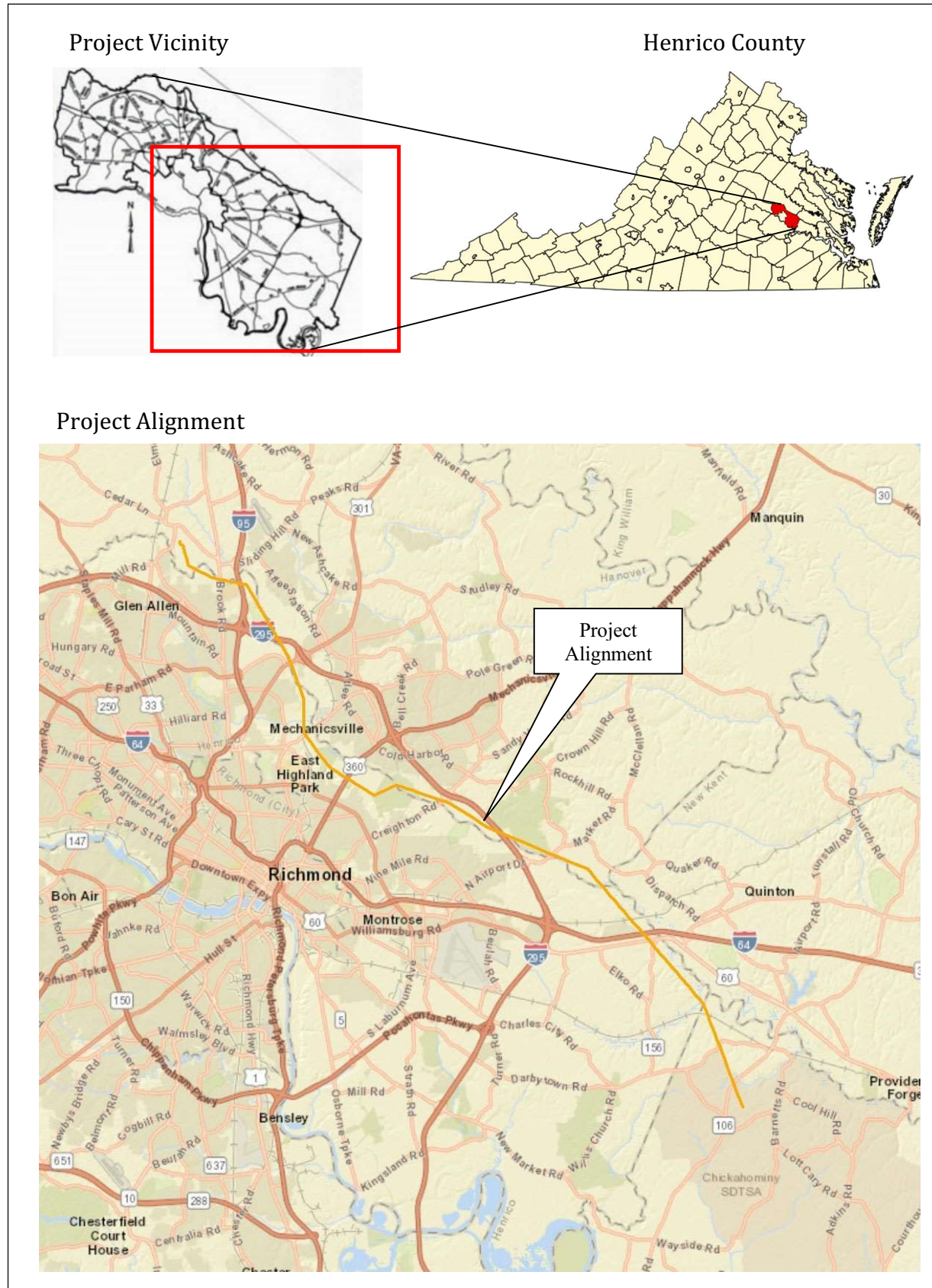


Figure 1-1: General location of the project.

## 2. PROJECT DESCRIPTION

The Chickahominy-Elmont project involves the rebuild of approximately 27.7 miles of existing 500kV transmission line extending generally from the Chickahominy substation in Charles City County to the Elmont substation in Hanover County (Figure 2-1). The line was constructed in 1971, and the project is needed to rebuild it to current standards based on the Company's End of Life Criteria and in order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation Reliability Standards.

The existing transmission line is suspended from steel lattice structures with a weathering finish that average 119 feet in height and are centered within a variable-width ROW that along many segments is shared by additional transmission lines. As a part of the rebuild, the existing transmission structures will be replaced generally on a one-to-one basis in the same location with 5/2 steel H-frame structures, and a limited number of 3-pole structures, all with a weathering finish and an average height of 145 feet (Figure 2-2). All project improvements will take place within existing ROW and no new permanent ROW will be necessary.

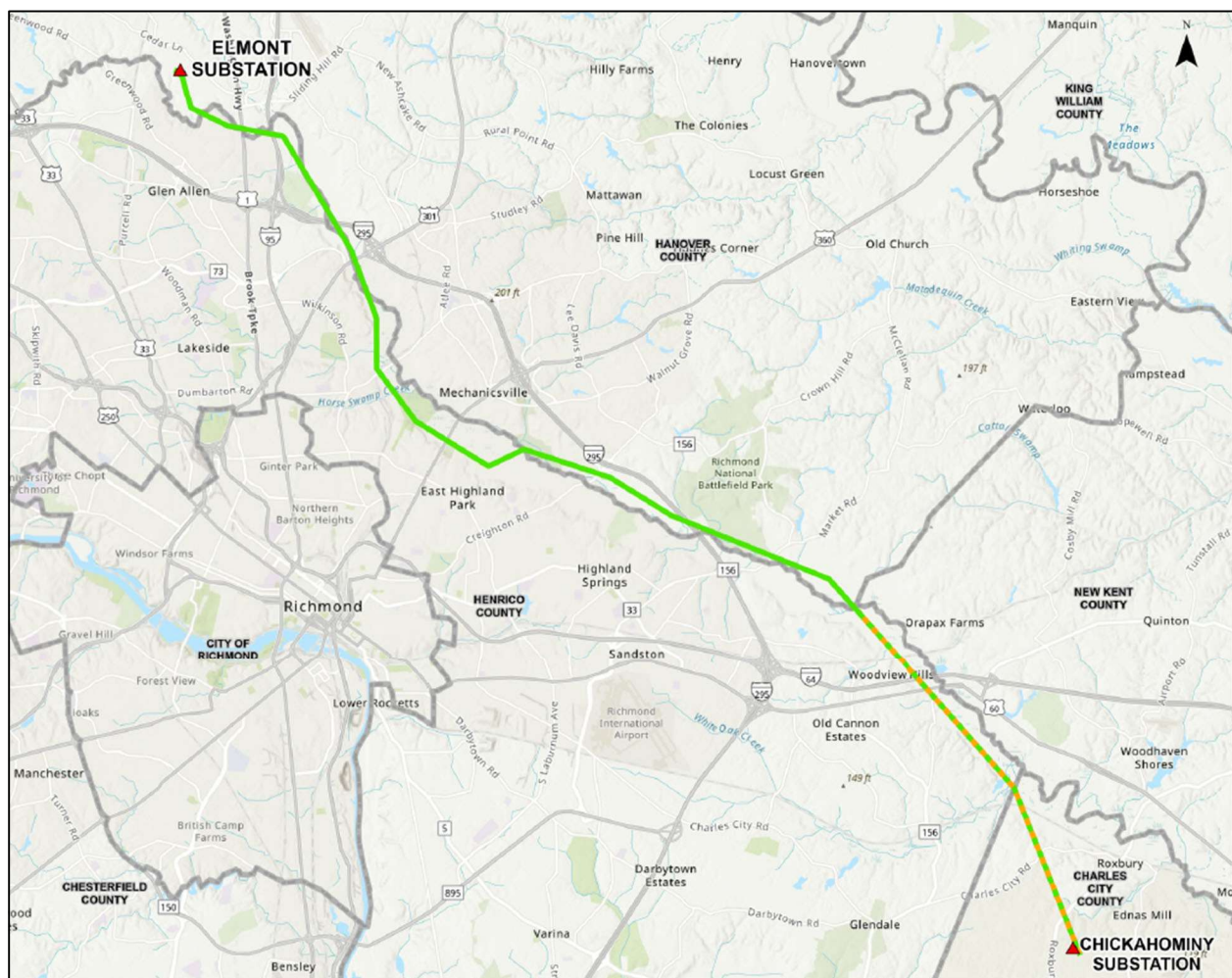
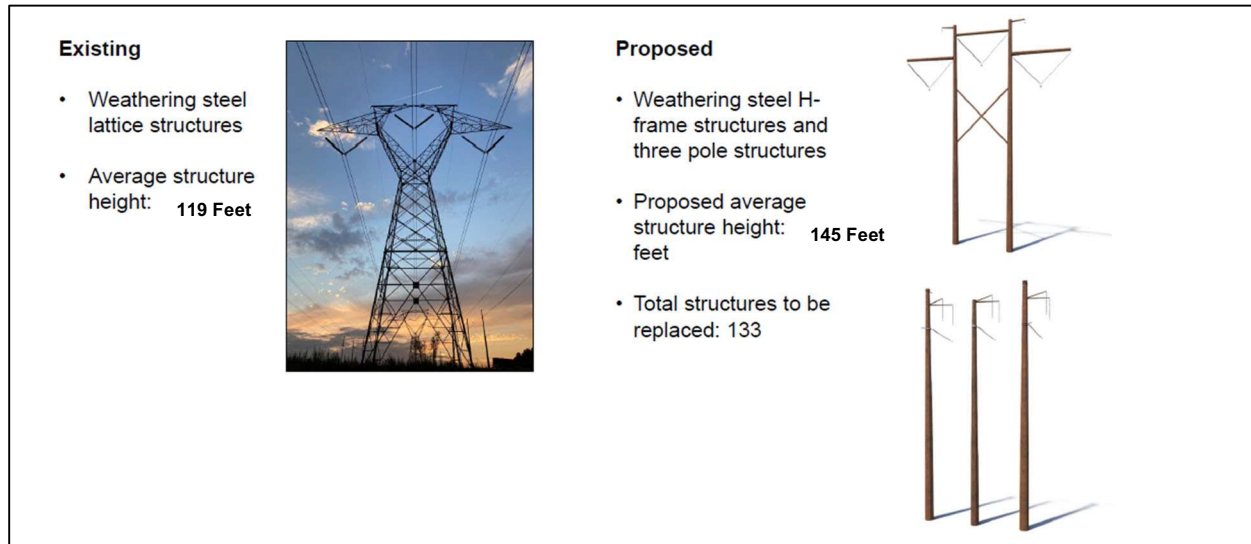


Figure 2-1: Project overview map. Source: Dominion Energy





**Figure 2-2: Existing and Proposed Structure Comparison. Source: Dominion Energy**

### 3. RESEARCH DESIGN

The intent of this effort was to identify all known historic properties within the vicinity of the proposed project study area in order to assess them for potential impacts brought about by the project. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each previously recorded historic property, an examination of property documentation, current aerial photography, and a field reconnaissance was undertaken to assess each property's integrity of feeling, setting, and association, and to provide photo documentation of the property including views toward the proposed project. The D+A personnel who directed and conducted this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9).

#### ARCHIVAL RESEARCH

In February 2025, D+A conducted archival research with the goal of identifying all previously recorded historic properties and any additional historic property locations referred to in historic documents and other archives, as well as consultation with local informants and other professionals with intimate knowledge of the project area as appropriate. Background research was conducted at the VDHR and on the internet and included the following sources:

- VDHR Virginia Cultural Resource Information System (VCRIS) site files; and
- National Park Service (NPS), American Battlefield Protection Program (ABPP), maps and related documentation.

Because the project crosses Civil War battlefields, and property managed by the NPS as a part of the Richmond National Battlefield Park, coordination with park staff was also conducted in the early stages of this effort to gather data and coordinate investigations.

Data collection was performed according to VDHR guidance in *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and was organized in a multi-tier approach. As such, the effort was designed to identify all previously recorded NHL's located within 1.5-miles of the proposed project study area, all historic properties listed in the NRHP, battlefields, and historic landscapes located within 1-mile of the project area, all historic properties previously determined eligible for listing in the NRHP located within 0.5-mile of the project area, as well as all archaeological sites located directly within the project area.

#### FIELD RECONNAISSANCE

Field reconnaissance included visual inspection of historic properties within the study tiers, although no inspection of archaeological sites or subsurface testing was performed at this time. Visual inspection included digital photo documentation of each property's existing conditions including its setting and views toward the proposed project. Photographs were taken of primary resource elevations, general setting, and existing viewsheds. All photographs were taken from public right-of-way or where property access was granted.



## ASSESSMENT OF POTENTIAL IMPACTS

Following identification and field inspection of historic properties, D+A assessed each architectural resource for potential impacts brought about by the proposed project in accordance with VDHR's *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008). Assessment of impacts was conducted through a combination of field inspection, digital photography, review of topography and aerial photography, 3D modeling, and photo simulation. When utilized, 3D modeling and photo simulation was conducted from representative vantage points within or near each resource property deemed most likely to have a change in visibility as a result of the project. These models and simulations are a representation of the what the project may look like based upon data available at the time of the effort.

Archaeological assessment was not conducted as part of this effort and is therefore limited to desktop review of project improvements in relation to previously delineated site boundaries. Existing conditions of sites remain unknown at this level of investigation.

When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing and whether the project has the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not the proposed project would introduce new visual elements into a property's viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP. Identified impacts were characterized as severe, moderate, minimal, or none in accordance with the following guidance:

According to VDHR guidance, project impacts are characterized as such:

- **None** – Project is not visible from the property.
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

## REPORT PREPARATION

The results of the archival resource, field inspection, and analysis were synthesized and summarized in a summary report accompanied by maps, illustrations, and photographs as appropriate. All research material and documentation generated by this project is on file at D+A's office in Midlothian, Virginia.

## 4. ARCHIVES SEARCH

This section includes a summary of efforts to identify previously known and recorded cultural resources within the tiered study buffers. It includes lists, maps, and descriptive data on all previously conducted cultural resource surveys, and previously recorded architectural resources and archaeological sites according to the VDHR archives and VCRIS database.

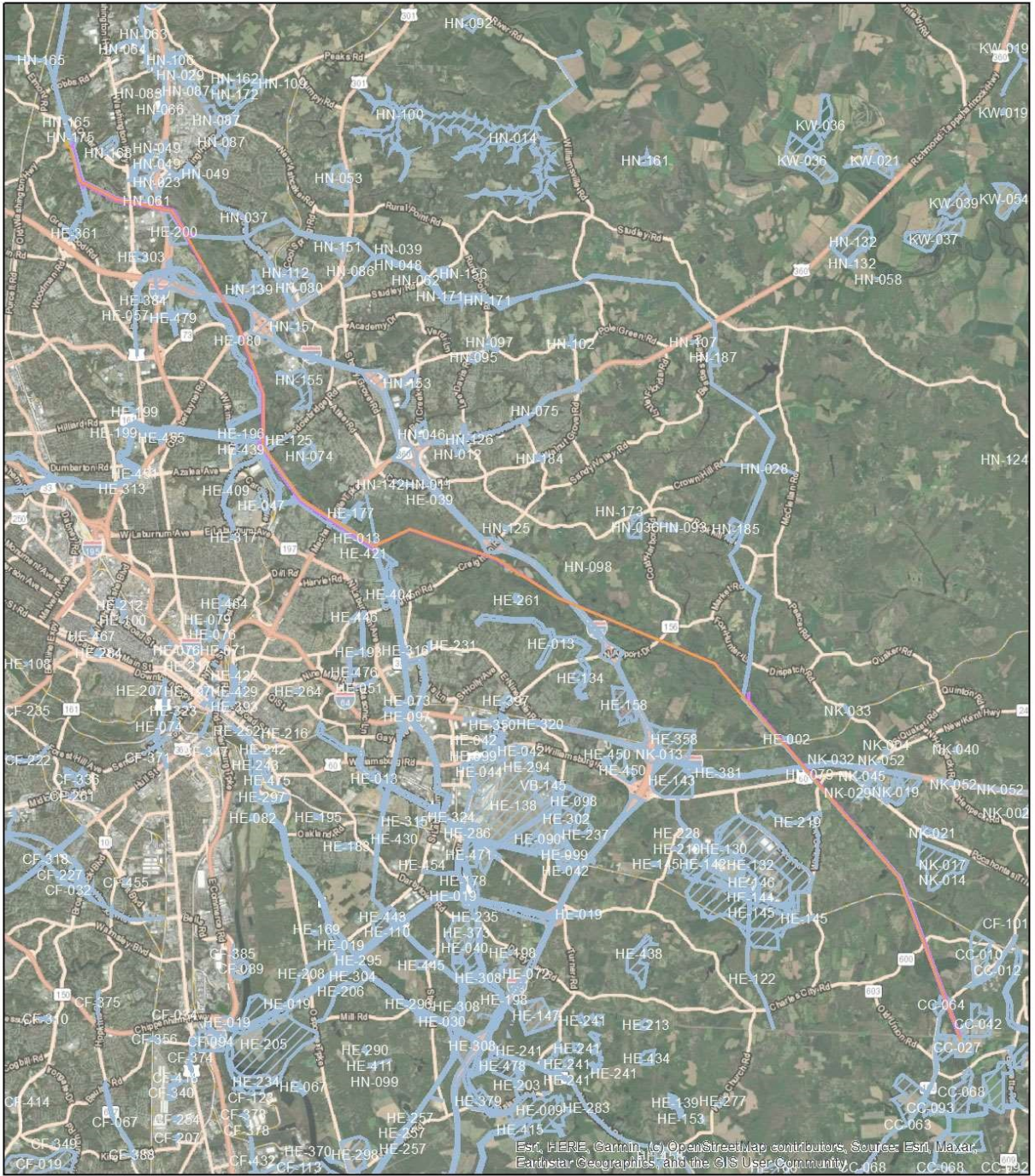
### PREVIOUSLY SURVEYED AREAS

VDHR and VCRIS records indicate that there have been fifty-eight (58) prior Phase I cultural resource surveys within one mile of the project alignment, nineteenth (19) of which overlap with or include portions of the project ROW (Table 4-1). These surveys are at a minimum archaeological in nature, although some include architectural resources as well. The 19 surveys overlapping the project ROW were conducted for transportation and utility-related projects, as well as some private development projects. As a result of these prior surveys, discrete lengths of the overall project ROW have been subject to survey although much of the ROW remains unsurveyed. The 19 previously conducted cultural resource surveys that include portions of the project ROW are listed in Table 4-1 and illustrated in Figure 4-1.

**Table 4-1: Previously conducted cultural resource surveys that include portions of the project ROW. Source: VDHR.**

VDHR Survey #	Title	Author	Date	Project Review #
CC-027	Cultural Resources Investigation of the Chickahominy Tract, Charles City County, Virginia	BROCK	2001	2001-1256
CC-042	Archaeological Phase I Survey of the Black Parcels, LNG Peakshaving Facility, Charles City County, Virginia	TRC	1995	courtesy
CC-064	Archaeological Survey of the C4GT Tract, Charles City County, Virginia	ACCI	2016	2016-1002
HE-013	Archeology in Henrico, Volume 1: Identification and Evaluation of Archaeological and Historic Resources for the Henrico County, Virginia Regional Wastewater System	VCUARC	1978	<Null>
HE-039	An Archeological Reconnaissance of Route 295, Richmond, Virginia	VSL	1975	<Null>
HE-073	A Phase I Cultural Resources Survey of the Proposed Eastern Henrico Lateral Pipeline, Hanover, Chesterfield, and Henrico Counties, Virginia	WMCAR	1990	1991-0135
HE-080	A Phase I Cultural Resource Survey of the Proposed Virginia Natural Gas, Inc. Gas Pipeline Delivery Point to the City of Richmond, Hanover and Henrico Counties, Virginia	WMCAR	1991	1991-1298
HE-125	Archaeological Survey of Three Pre-Designated Segments along Route 627 (Meadowbridge Road), Henrico and Hanover Counties	GP	1999	1997-0351
HE-177	Phase I Archaeological Identification Survey of Beaverdam Creek Pumping Station Force Main Improvements in Henrico County, Virginia	CRI	2002	1999-2018

VDHR Survey #	Title	Author	Date	Project Review #
HE-196	A Phase I Archaeological Survey Along the Proposed Lakeside to Strawberry Hill Pipeline, Henrico County, Virginia	CRI	2004	2005-0628
HE-421	A Phase I Cultural Resources Survey of Approximately 21.3 Miles Associated with the Proposed Chesterfield to Lakeside Rebuild Project in Henrico and Chesterfield Counties, Virginia	STANTEC	2019	2018-0120
HN-011	Second Archaeological Reconnaissance of Route 295, Richmond, Virginia	VSL	1976	<Null>
HN-039	Elmont-Old Church 230 kV Transmission Line, Hanover and Henrico Counties, Virginia: Phase I Intensive Cultural Resources Survey	BROWNING	1992	1991-1308
HN-048	Phase I Cultural Resources Investigations of Proposed 15.8-Mile Elmont to Old Church Overhead Transmission Line, Hanover and Henrico Counties, Virginia	GP	1993	1991-1308
HN-061	Phase I Cultural Resource Survey, Proposed Improvements to Telegraph Road, Hanover and Henrico Counties, Virginia	LBG	2000	2000-1957
HN-079	Phase I Cultural Resources Survey of the Elmont-Chickahominy 230kV Line from the Old Church Substation in Hanover County to the Chickahominy Substation in Charles City County	CRI	2004	2004-1864
HN-175	Archaeological Survey, Fall Line Trail Segments 7C.2, 7C.3, & 7C.4, Town of Ashland and Hanover and Henrico Counties, Virginia	WMCAR	2022	2023-4085
NK-013	Archaeological Survey of Proposed Improvements to Interstate 64, Henrico and New Kent Counties, Virginia	VDOT	2002	2002-0680
NK-032	A Phase I Archaeological Survey of Selected Areas within the Interstate 64 Peninsula Study from Interstate 664 in Hampton to Interstate 95 in Richmond, Virginia	DOVE	2012	2008-1573



**Figure 4-1: Previously conducted surveys that include portions of the project ROW. Source: VCRIS**



## ARCHAEOLOGICAL SITES

Review of the VDHR VCRIS records reveals there are two-hundred-eighty-two (282) previously recorded archaeological sites within one mile of the project alignment, thirty-one (31) of which are located within the project ROW. The sites within the project ROW include prehistoric lithic scatters and camps, as well as historic domestic sites, railroad features, earthworks, and trash scatters. Of these, seven (7) have been determined eligible or potentially eligible for listing in the NRHP, eight (8) have been determined not eligible for listing, and the remaining sites have not been formally evaluated.

Table 4-2 lists all previously recorded archaeological resources within one-mile of the project. Figure 4-2 and Figure 4-3 illustrates the locations of all previously recorded sites within one mile of the project area and Figure 4-4 details the locations of those sites located within the project ROW.

**Table 4-2: Previously recorded archaeological resources within one mile of the project area. Bold listings denote sites listed in- or eligible for the NRHP. Orange highlight denotes site is located within or crossed by the project ROW.**

VDHR #	Type	Temporal Association	NRHP Status
44CC0021	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44CC0181	Dwelling, single	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 2nd half (1850 - 1899)	Not Evaluated
44CC0182	No Data	19th Century (1800 - 1899)	Not Evaluated
44CC0183	No Data	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44CC0185	Road	18th Century: 1st half (1700 - 1749)	Not Evaluated
44CC0320	Dwelling, single	Historic/Unknown	Not Evaluated
44CC0321	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44CC0322	Dwelling, single, Trash pit	20th Century: 2nd quarter (1925 - 1949)	Not Evaluated
44CC0362	Dwelling, single	18th Century: 4th quarter (1775 - 1799), 19th Century (1800 - 1899), 20th Century: 1st quarter (1900 - 1924)	Not Evaluated
44CC0369	Dwelling, single, Trash scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	DHR Staff: Not Eligible
44CC0390	Camp	<b>Late Archaic (3000 - 1201 B.C.), Middle Woodland (300 - 999 A.D.)</b>	<b>DHR Staff: Potentially Eligible</b>
44CC0442	Artifact scatter	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44CC0444	Artifact scatter	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44CC0445	Artifact scatter	Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	Not Evaluated

VDHR #	Type	Temporal Association	NRHP Status
44CC0461	Battlefield	Civil War (1861 - 1865)	DHR Staff: Potentially Eligible
44CC0477	Artifact scatter, Other	Pre-Contact, Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	Not Evaluated
44CC0478	Farmstead	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44CC0479	Farmstead	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44CC0480	Artifact scatter, Camp	Middle Woodland (300 - 999 C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44CC0481	Artifact scatter, Other	Pre-Contact, Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44CC0482	Artifact scatter, Other	Pre-Contact, Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	Not Evaluated
44CC0483	Artifact scatter	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	Not Evaluated
44CC0484	Camp, temporary	Pre-Contact	Not Evaluated
44CC0485	Dwelling, single	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	Not Evaluated
44CC0486	Artifact scatter	Pre-Contact, World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	Not Evaluated
44CC0487	Camp	Pre-Contact	Not Evaluated
44CC0488	Trash pit	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	Not Evaluated
44HE0001	Camp, base, Stone pile	Early Archaic Period (8500 - 6501 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Colony to Nation (1751 - 1789)	DHR Staff: Potentially Eligible
44HE0003	Camp, base	Late Archaic Period (3000 - 1201 B.C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44HE0004	Camp, temporary	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44HE0005	No Data	Late Archaic Period (3000 - 1201 B.C.E)	DHR Staff: Potentially Eligible
44HE0008	No Data	Middle Archaic Period (6500 - 3001 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible

VDHR #	Type	Temporal Association	NRHP Status
44HE0009	No Data	Historic/Unknown, Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44HE0010	No Data	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44HE0016	No Data	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	Not Evaluated
44HE0019	No Data	<Null>	DHR Staff: Potentially Eligible
44HE0020	No Data	Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44HE0021	No Data	Middle Woodland (300 - 999 C.E)	DHR Staff: Potentially Eligible
44HE0023	No Data	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44HE0026	No Data	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44HE0027	No Data	Late Archaic Period (3000 - 1201 B.C.E)	DHR Staff: Potentially Eligible
44HE0028	No Data	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E)	DHR Staff: Potentially Eligible
44HE0032	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0033	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0034	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0039	No Data	Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0040	No Data	Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0045	No Data	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44HE0046	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0047	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0048	No Data	<Null>	Not Evaluated
44HE0049	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0050	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0054	Camp, temporary	Paleo-Indian (15000 - 8501 B.C.)	Not Evaluated
44HE0055	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated



VDHR #	Type	Temporal Association	NRHP Status
44HE0056	Lithic workshop	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44HE0066	No Data	<Null>	DHR Staff: Not Eligible
44HE0067	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0069	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0070	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0071	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0072	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0073	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0076	No Data	<Null>	Not Evaluated
44HE0142	Other	19th Century (1800 - 1899)	Not Evaluated
44HE0143	Dwelling, single	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 4th quarter (1875 - 1899), 20th Century (1900 - 1999)	Not Evaluated
44HE0158	Camp	<Null>	DHR Staff: Not Eligible
44HE0159	Camp	Middle Archaic (6500 - 3001 B.C.), Late Archaic (3000 - 1201 B.C.), Early Woodland (1200 B.C. - 299 A.D.)	Not Evaluated
44HE0160	Camp	Early Woodland (1200 B.C. - 299 A.D.)	Not Evaluated
44HE0161	Camp	<Null>	Not Evaluated
44HE0162	Camp	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	Not Evaluated
44HE0174	Camp, Dwelling, single	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 18th Century (1700 - 1799)	Not Evaluated
44HE0175	Earthworks	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Potentially Eligible
44HE0176	Camp	<Null>	DHR Staff: Not Eligible
44HE0192	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0193	Camp	Early Archaic (8500 - 6501 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0194	Other	Historic/Unknown, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0195	Camp	<Null>	Not Evaluated
44HE0196	Camp	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0197	Camp, Other	Historic/Unknown, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0199	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HE0200	No Data	Late Archaic (3000 - 1201 B.C.)	Not Evaluated
44HE0202	Camp, temporary	Early Archaic (8500 - 6501 B.C.)	Not Evaluated
44HE0203	No Data	Late Archaic (3000 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0204	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0206	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0207	Lithic scatter	Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0246	Earthworks	19th Century (1800 - 1899)	Not Evaluated

VDHR #	Type	Temporal Association	NRHP Status
<b>44HE0251</b>	<b>Camp, temporary, Trash scatter</b>	<b>Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.), 19th Century (1800 - 1899), 20th Century (1900 - 1999)</b>	<b>DHR Staff: Eligible</b>
44HE0252	No Data	Historic/Unknown, Early Archaic (8500 - 6501 B.C.)	Not Evaluated
44HE0253	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0256	Dwelling, single	18th Century: 2nd half (1750 - 1799), 19th Century (1800 - 1899)	Not Evaluated
44HE0258	Other, Road	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HE0259	Cemetery	Archaic (8500 - 1201 B.C.), 19th Century (1800 - 1899), 19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HE0260	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HE0261	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
<b>44HE0275</b>	<b>Artifact scatter</b>	<b>Pre-Contact</b>	<b>Not Evaluated</b>
44HE0276	No Data	Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44HE0309	Camp	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0310	No Data	19th Century (1800 - 1899)	Not Evaluated
44HE0311	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0312	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0313	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), Late Archaic (3000 - 1201 B.C.), Late Woodland (1000 - 1606)	Not Evaluated
44HE0314	Trash pit	19th Century: 2nd half (1850 - 1899), 20th Century: 1st half (1900 - 1949)	Not Evaluated
44HE0315	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 18th Century: 2nd half (1750 - 1799), 19th Century: 1st half (1800 - 1849)	Not Evaluated
44HE0316	Camp	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0317	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0318	Camp	Middle Archaic (6500 - 3001 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0319	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0320	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0332	Other	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HE0333	Camp	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0358	Artifact scatter, Dwelling, single	Pre-Contact, Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44HE0361	Dam, Mill	19th Century (1800 - 1899)	Not Evaluated
44HE0374	Dwelling, single	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	Not Evaluated
44HE0403	No Data	Indeterminate	Not Evaluated
44HE0414	No Data	Historic/Unknown, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0417	No Data	Historic/Unknown	Not Evaluated
44HE0418	Farmstead	Historic/Unknown	Not Evaluated
44HE0419	No Data	Historic/Unknown	Not Evaluated
44HE0421	No Data	Historic/Unknown	Not Evaluated

VDHR #	Type	Temporal Association	NRHP Status
44HE0427	No Data	Historic/Unknown	Not Evaluated
<b>44HE0434</b>	<b>Other</b>	<b>Historic/Unknown</b>	<b>DHR Staff: Potentially Eligible</b>
44HE0470	Camp, base, Village/Town	Early Archaic (8500 - 6501 B.C.), Late Archaic (3000 - 1201 B.C.), Middle Woodland (300 - 999 A.D.), Late Woodland (1000 - 1606)	Not Evaluated
44HE0549	No Data	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Not Eligible
44HE0565	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0566	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0567	Other	<Null>	Not Evaluated
44HE0570	Camp	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0650	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0651	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0652	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0653	Artifact scatter, Dwelling, single	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated
44HE0679	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0766	Artifact scatter	Pre-Contact	Not Evaluated
44HE0767	No Data	Historic/Unknown, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0768	No Data	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	DHR Staff: Not Eligible
44HE0769	Camp, temporary	Middle Woodland (300 - 999 C.E)	DHR Staff: Not Eligible
<b>44HE0770</b>	<b>No Data</b>	<b>Woodland (1200 B.C. - 1606 A.D.)</b>	<b>DHR Staff: Eligible</b>
<b>44HE0771</b>	<b>No Data</b>	<b>Prehistoric/Unknown (15000 B.C. - 1606 A.D.)</b>	<b>DHR Staff: Eligible</b>
<b>44HE0772</b>	<b>No Data</b>	<b>Woodland (1200 B.C. - 1606 A.D.)</b>	<b>DHR Staff: Eligible</b>
44HE0775	Other	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HE0780	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44HE0781	Camp	<Null>	Not Evaluated
44HE0800	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HE0809	No Data	Pre-Contact	DHR Staff: Not Eligible

VDHR #	Type	Temporal Association	NRHP Status
44HE0815	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0821	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HE0822	No Data	Late Archaic (3000 - 1201 B.C.)	Not Evaluated
44HE0823	No Data	Middle Archaic (6500 - 3001 B.C.)	Not Evaluated
44HE0824	No Data	Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HE0825	No Data	Historic/Unknown	Not Evaluated
44HE0826	No Data	Early Archaic (8500 - 6501 B.C.), Middle Archaic (6500 - 3001 B.C.)	Not Evaluated
44HE0952	No Data	Historic/Unknown	Not Evaluated
44HE0953	Camp	Early Archaic (8500 - 6501 B.C.), Late Archaic (3000 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.), 19th Century: 2nd half (1850 - 1899)	DHR Staff: Not Eligible
44HE0966	Earthworks, Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 2nd quarter (1825 - 1849)	DHR Staff: Not Eligible
44HE0978	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44HE1007	Camp	Late Archaic (3000 - 1201 B.C.), Middle Woodland (300 - 999 A.D.)	Not Evaluated
44HE1039	Earthworks	Historic/Unknown	Not Evaluated
44HE1063	Camp	<b>Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)</b>	<b>DHR Staff: Potentially Eligible</b>
44HE1065	Camp, Village/Town	<b>Paleo-Indian (15000 - 8501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)</b>	<b>DHR Staff: Eligible</b>
44HE1172	Earthworks	Civil War (1861 - 1865)	Not Evaluated
44HE1201	Artifact scatter	Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44HE1220	Train depot	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44HE1227	Artifact scatter, Dwelling, single, Other	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), World War I to World War II (1917 - 1945)	Not Evaluated
44HE1241	Other	<b>Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)</b>	<b>DHR Staff: Eligible</b>
44HE1242	Barn	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44HN0004	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0009	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated

VDHR #	Type	Temporal Association	NRHP Status
44HN0013	Camp, base	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0014	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0017	No Data	Woodland (1200 B.C. - 1606 A.D.), Late Woodland (1000 - 1606)	Not Evaluated
44HN0018	No Data	Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0043	No Data	Middle Archaic (6500 - 3001 B.C.)	Not Evaluated
44HN0044	No Data	Middle Archaic (6500 - 3001 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0045	No Data	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44HN0046	No Data	<Null>	Not Evaluated
44HN0047	No Data	Middle Archaic (6500 - 3001 B.C.)	Not Evaluated
44HN0048	No Data	Historic/Unknown, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0049	No Data	Middle Archaic (6500 - 3001 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0052	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0053	No Data	19th Century (1800 - 1899)	Not Evaluated
44HN0054	No Data	Woodland (1200 B.C. - 1606 A.D.), 18th Century (1700 - 1799)	Not Evaluated
<b>44HN0055</b>	<b>Camp, Trash scatter</b>	<b>Woodland (1200 B.C. - 1606 A.D.), 19th Century (1800 - 1899)</b>	<b>DHR Staff: Eligible</b>
44HN0056	No Data	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0057	No Data	<Null>	Not Evaluated
44HN0058	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0059	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0060	Camp, temporary	Indeterminate, Prehistoric/Unknown (15000 B.C. - 1606 A.D.), Woodland (1200 B.C. - 1606 A.D.), 19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HN0062	Mill, Mill, raceway	Historic/Unknown	Not Evaluated
44HN0064	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0065	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0100	No Data	Archaic (8500 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0104	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0112	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0124	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0125	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
<b>44HN0179</b>	<b>Camp, Earthworks</b>	<b>Late Archaic (3000 - 1201 B.C.), Early Woodland (1200 B.C. - 299 A.D.), Middle Woodland (300 - 999 A.D.), 19th Century: 3rd quarter (1850 - 1874)</b>	<b>DHR Staff: Eligible</b>
44HN0183	Camp, Other	Woodland (1200 B.C. - 1606 A.D.), 18th Century (1700 - 1799), 19th Century (1800 - 1899)	Not Evaluated
44HN0200	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0201	No Data	Historic/Unknown	Not Evaluated
<b>44HN0202</b>	<b>Camp</b>	<b>Prehistoric/Unknown (15000 B.C. - 1606 A.D.)</b>	<b>DHR Staff: Eligible</b>
<b>44HN0203</b>	<b>Camp</b>	<b>Prehistoric/Unknown (15000 B.C. - 1606 A.D.)</b>	<b>DHR Staff: Eligible</b>

VDHR #	Type	Temporal Association	NRHP Status
44HN0204	Camp	Middle Archaic (6500 - 3001 B.C.), Late Archaic (3000 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	DHR Staff: Eligible
44HN0205	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44HN0206	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44HN0207	Camp	<Null>	Not Evaluated
44HN0208	Trash scatter	Middle Archaic (6500 - 3001 B.C.), Late Archaic (3000 - 1201 B.C.), 19th Century (1800 - 1899)	Not Evaluated
44HN0221	No Data	Historic/Unknown, Woodland (1200 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44HN0222	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Potentially Eligible
44HN0237	No Data	<Null>	DHR Staff: Not Eligible
44HN0238	Barn	20th Century (1900 - 1999)	DHR Staff: Not Eligible
44HN0239	Cemetery	20th Century (1900 - 1999)	DHR Staff: Not Eligible
44HN0279	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century (1800 - 1899)	DHR Staff: Not Eligible
44HN0280	Camp	Pre-Contact	DHR Staff: Not Eligible
44HN0289	Camp	Middle Archaic (6500 - 3001 B.C.), Late Archaic (3000 - 1201 B.C.), Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0305	Mill	19th Century: 2nd half (1850 - 1899)	Not Evaluated
44HN0306	Mill, raceway	19th Century: 2nd half (1850 - 1899)	Not Evaluated
44HN0308	Camp, temporary	Middle Woodland (300 - 999 A.D.)	DHR Staff: Not Eligible
44HN0309	Farmstead	19th Century: 1st half (1800 - 1849)	DHR Staff: Potentially Eligible
44HN0312	Dwelling, single	18th Century: 4th quarter (1775 - 1799)	Not Evaluated
44HN0329	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44HN0332	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44HN0337	Camp, temporary, Dwelling, single	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44HN0338	Camp, temporary, Dwelling, single	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44HN0339	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44HN0340	Farmstead	20th Century (1900 - 1999)	DHR Staff: Not Eligible
44HN0341	Camp, temporary, Dwelling, single	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44HN0352	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible

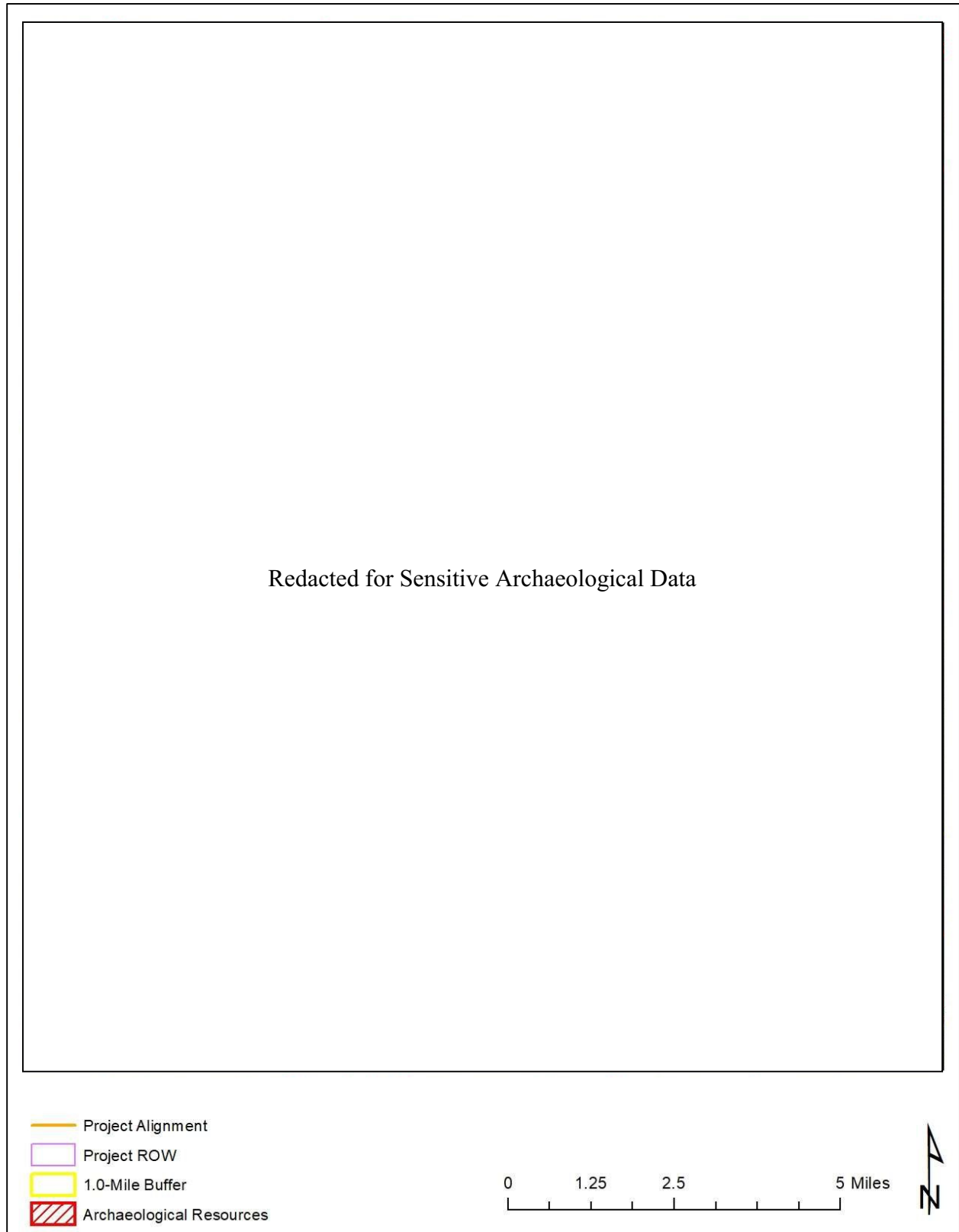


VDHR #	Type	Temporal Association	NRHP Status
44HN0391	Lithic scatter	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E)	Not Evaluated
44HN0392	Lithic workshop	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44HN0393	Trash scatter	20th Century (1900 - 1999)	Not Evaluated
44HN0394	Camp	19th Century: 2nd/3rd quarter (1825 - 1874)	Not Evaluated
44HN0414	Artifact scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44HN0415	Artifact scatter	Late Archaic Period (3000 - 1201 B.C.), World War I to World War II (1917 - 1945)	Not Evaluated
44HN0420	Camp	Early Archaic Period (8500 - 6501 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Evaluation Committee: Not Eligible
44HN0421	Camp, temporary	Pre-Contact	DHR Staff: Not Eligible
44HN0422	Camp, temporary, Dwelling, single	Pre-Contact, World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44HN0423	Camp	Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Evaluation Committee: Not Eligible
44HN0424	Camp, temporary	Middle Archaic Period (6500 - 3001 B.C.E)	DHR Staff: Not Eligible
44HN0425	Camp, temporary	Middle Woodland (300 - 999 C.E)	DHR Staff: Not Eligible
44HN0426	Camp, temporary	Late Archaic Period (3000 - 1201 B.C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Evaluation Committee: Not Eligible
44HN0427	Camp, temporary	Pre-Contact	DHR Staff: Not Eligible
44HN0428	Camp, temporary	Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	DHR Staff: Not Eligible
44HN0429	Camp, temporary	Pre-Contact	DHR Staff: Not Eligible
44HN0430	Camp, temporary	Late Woodland (1000 - 1606)	Not Evaluated
44HN0432	Grave/burial, single	Reconstruction and Growth (1866 - 1916)	Not Evaluated
44HN0458	Artifact scatter	The New Dominion (1946 - 1991)	Not Evaluated
44HN0460	Artifact scatter	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	DHR Staff: Not Eligible
44HN0461	Artifact scatter	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44HN0462	Artifact scatter, Camp, temporary	Middle Archaic Period (6500 - 3001 B.C.E), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)	DHR Staff: Not Eligible
44HN0463	Artifact scatter	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44HN0468	Artifact scatter	Pre-Contact, World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible

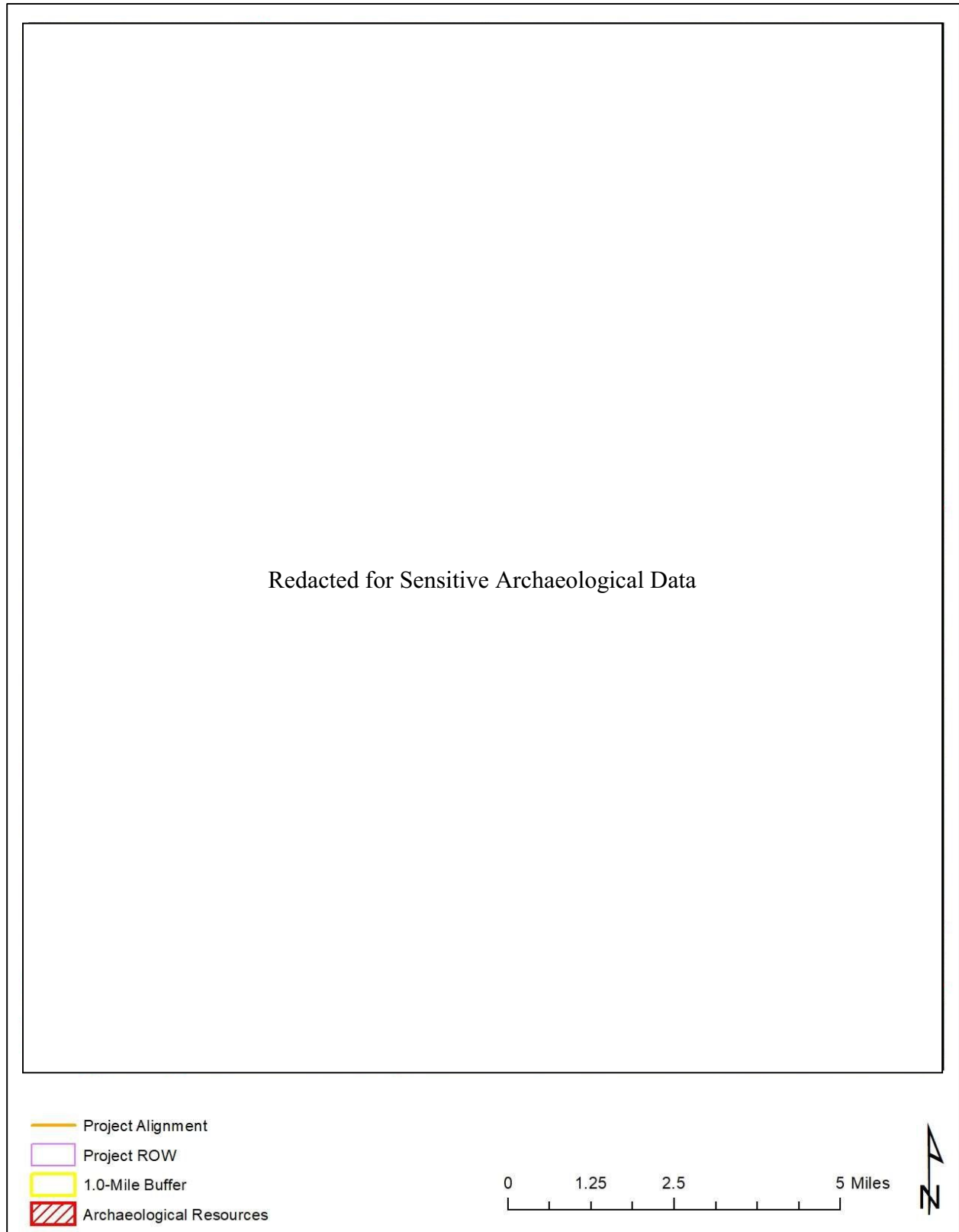


VDHR #	Type	Temporal Association	NRHP Status
44HN0469	Farmstead	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44HN0470	Artifact scatter	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44HN0471	Artifact scatter	Pre-Contact, Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44HN0472	Lithic scatter	Pre-Contact	DHR Staff: Not Eligible
44HN0473	Dwelling, single	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44HN0474	Railroad bed	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44NK0100	Artifact scatter, Camp, temporary	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Potentially Eligible
44NK0169	Earthworks	19th Century: 3rd quarter (1850 - 1874)	DHR Staff: Eligible
44NK0170	Earthworks	19th Century: 3rd quarter (1850 - 1874)	Not Evaluated
44NK0189	Camp, base	Middle Woodland (300 - 999 A.D.), Late Woodland (1000 - 1606)	DHR Staff: Potentially Eligible
44NK0199	Camp, base	<Null>	Not Evaluated
44NK0200	Camp, base	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0201	Camp, base	Middle Archaic (6500 - 3001 B.C.), Early Woodland (1200 B.C. - 299 A.D.), Middle Woodland (300 - 999 A.D.), Late Woodland (1000 - 1606)	Not Evaluated
44NK0202	Camp, base	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44NK0225	Camp, temporary	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0226	Camp, temporary	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0227	Camp, temporary	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44NK0228	Camp, temporary	Indeterminate	Not Evaluated
44NK0229	Camp, temporary	Woodland (1200 B.C. - 1606 A.D.)	Not Evaluated
44NK0272	Camp	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0273	Camp	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0274	Camp	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0275	Camp	Middle Woodland (300 - 999 A.D.), Late Woodland (1000 - 1606)	Not Evaluated
44NK0276	Camp	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0277	Camp	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0278	Camp	Middle Woodland (300 - 999 A.D.)	Not Evaluated
44NK0281	Artifact scatter, Camp, temporary, Other	Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), Post Cold War (1992 - Present)	DHR Staff: Potentially Eligible

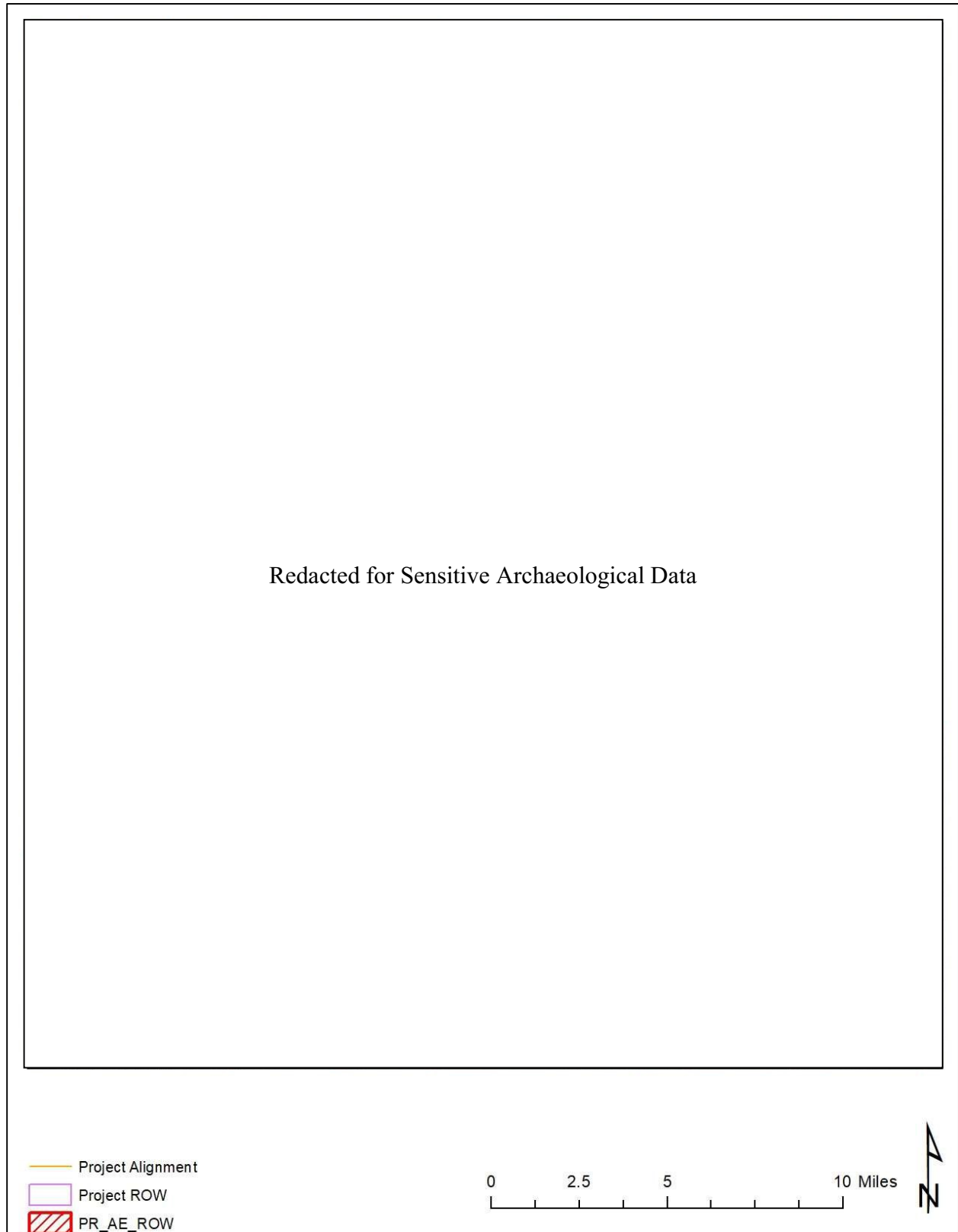
VDHR #	Type	Temporal Association	NRHP Status
44NK0282	Artifact scatter, Camp, Camp, temporary	Middle Archaic Period (6500 - 3001 B.C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Potentially Eligible
44NK0283	Artifact scatter, Camp, temporary, Dwelling, single	Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	Not Evaluated



**Figure 4-2: Previously recorded archaeological resources located within 1- mile of project (north-half of project alignment). Source: VCRIS**



**Figure 4-3: Previously recorded archaeological resources located within 1- mile of project (south-half of project alignment). Source: VCRIS**



**Figure 4-4: Map of previously recorded archaeological resources within or crossed by the project ROW.**  
**Source: VCRIS**

## ARCHITECTURAL RESOURCES

Review of the VDHR VCRIS inventory records revealed a total of six-hundred-fifty-one (651) previously recorded architectural resources are located within 1.5 mile of the project alignment. Of these, there are no (0) NHLs located within 1.5 mile of the proposed project or closer, five (5) NRHP-listed properties and eleven (11) battlefields located within 1.0 mile or closer of the project, and five (5) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the project. One (1) of the NRHP-listed resources, seven (7) of the battlefields, and two (2) of the NRHP-eligible resources are directly crossed by the project alignment.

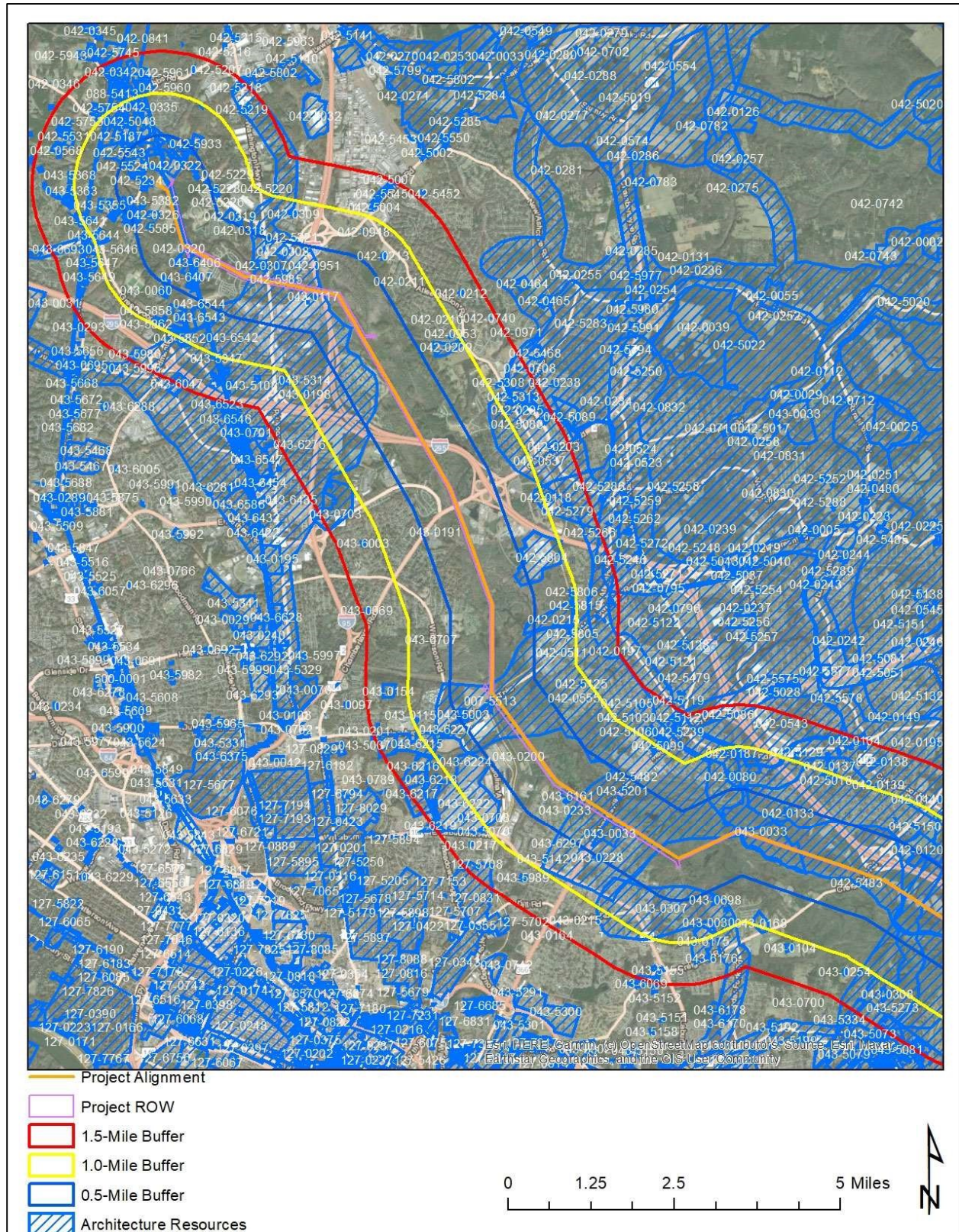
Table 4-3 lists all NHLs, NRHP-listed, and NRHP-eligible resources within their respective buffered tiers. A map of all previously recorded architectural resources within 1.5-mile of the project study area is depicted in Figure 4-5 and a map of any NHL, NRHP-listed, and NRHP-eligible resources within their respective study tiers are included in **Error! Reference source not found.**

**Table 4-3: Considered Architectural Resources within their respective tiered buffer zones for the project.**  
**Source: VCRIS**

Buffer(miles)	Considered Resources	VDHR #	Description
<b>1.5</b>	National Historic Landmarks	None	None
<b>1.0</b>	National Historic Landmarks	None	None
	National Register- Listed	042-0137	Oakley Hill
		042-5509	Ashland UDC Jefferson Davis Highway Marker
	Battlefields	042-5022	Battle of Bethesda Church (Historic), Battle of Crumps Creek (Historic), Battle of Hanover town (Historic), Battle of Shady Grove Road (Historic), Totopotomoy Creek Battlefield (Current Name)
	Historic Landscapes	None	None
		None	None
<b>0.5</b>	National Historic Landmarks	None	None
	National Register- Listed	042-0120	Hogan House, 6279 Powhite Farm Drive
		043-6408	Indian Springs Farm Site (NRHP Listing), Wilson Site (Historic)
	Battlefields	043-0307	Battle of Chaffin's Farm, New Market Road (Historic/Location), New Market Heights Battlefield (Historic/Current)
		043-5077	Frazier's Farm (Historic), Glendale Battlefield (Current Name), Glendale Battlefield (Historic), Nelson's Farm (Historic)

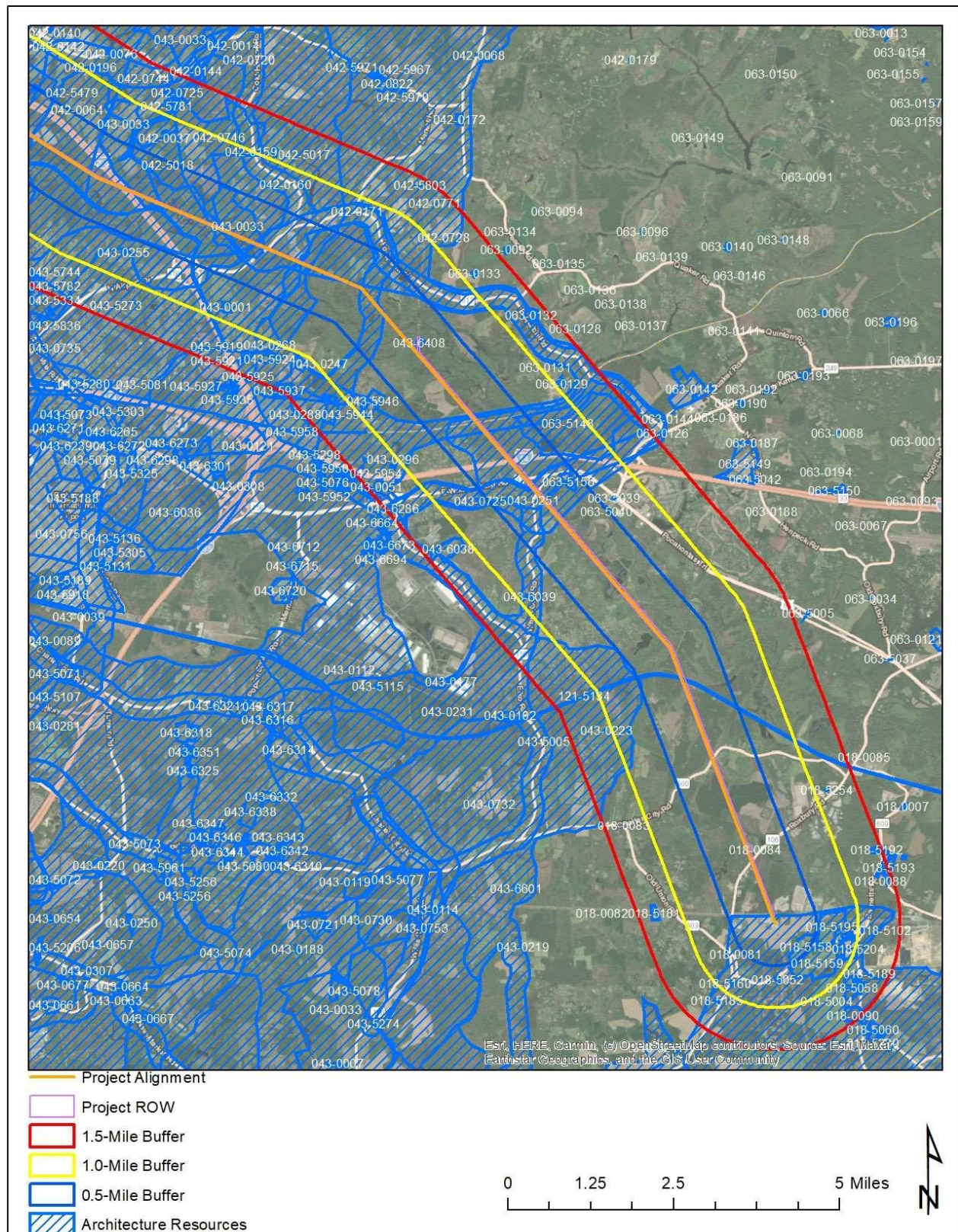


		043-5273	Battle of Garnett's and Golding's Farm (Historic/Location)
	Historic Landscapes	None	None
	National Register- Eligible	007-5513	Virginia Central Railroad
		043-0175	Ravenswood (Current)
		043-0800	Antique Carousel, Virginia Center Commons
<b>0.0 (ROW)</b>	National Historic Landmarks	None	None
	National Register- Listed	043-0033	Richmond National Battlefield Park
	Battlefields	018-5004	Saint Mary's Church Battlefield
		042-5017	Second Cold Harbor Battlefield
		042-5018	First Cold Harbor Battlefield, Gaines' Mill Battlefield
		042-5479	Beaver Dam Creek Battlefield (Current Name)
		043-0308	Savage Station Battlefield
		043-5081	Fair Oaks (Historic), Seven Pines Battlefield (Historic)
		043-5108	Yellow Tavern Battlefield (Historic)
	Historic Landscapes	None	None
	National Register- Eligible	043-5347	Richmond-Ashland Trolley Line
		121-5134	Chesapeake and Ohio Railroad (Historic), CSX Railroad (Current Name)



**Figure 4-5: All previously identified architectural resources within 1.5-miles of the project alignment (north-half of project alignment). Source: VCRIS**





**Figure 4-6: All previously identified architectural resources within 1.5-miles of the project alignment (south-half of project alignment). Source: VCRIS**

## NPS AMERICAN BATTLEFIELD PROTECTION PROGRAM (ABPP)

A review of the NPS ABPP records and maps prepared by the Civil War Sites Advisory Commission (CWSAC) revealed the project area extends through portions of multiple battlefields.

As defined by the ABPP in 2009, battlefields may be divided into three tiers that correlate to both the historic association and the current level of integrity and preservation. The battlefield *study area* represents the historic extent of the battle as it unfolded upon the landscape; the battlefield *core area* represents the areas of fighting on the battlefield and typically includes the areas of greatest importance to understanding the events of the battle; and the *potential National Register boundaries* encompass the area that remains reasonably intact and warrant preservation.

This review revealed that portions of eleven (11) battlefields are located within one mile of the project alignment. The project directly crosses through portions of seven (7) battlefields. The relative portions of the battlefields crossed and within one mile are tabulated in Table 4-4 and illustrated in Figure 4-7.

**Table 4-4: ABPP-Delineated battlefields located within one mile of the project. Source: VCRIS**

Site #	Battlefield	Study Area	National Register Area	Core Area
VA014	Seven Pines	Directly Crossed	Directly Crossed	Within One Mile
VA016	Beaver Dam Creek	Directly Crossed	Directly Crossed	Directly Crossed
VA017	Gaines' Mill	Directly Crossed	Directly Crossed	Directly Crossed
VA018	Battle of Garnett's and Golding's Farm	Within One Mile	Within One Mile	Within One Mile
VA019	Savage Station	Directly Crossed	Directly Crossed	Beyond One Mile
VA020	Glendale	Within One Mile	Within One Mile	Beyond One Mile
VA052	Yellow Tavern	Directly Crossed	Beyond One Mile	Directly Crossed
VA057	Totopotomoy Creek	Within One Mile	Beyond One Mile	Beyond One Mile
VA062	Cold Harbor	Directly Crossed	Directly Crossed	Directly Crossed
VA066	Saint Mary's Church	Directly Crossed	Directly Crossed	Within One Mile
VA075	Chaffin's Farm	Within One Mile	Beyond One Mile	Within One Mile



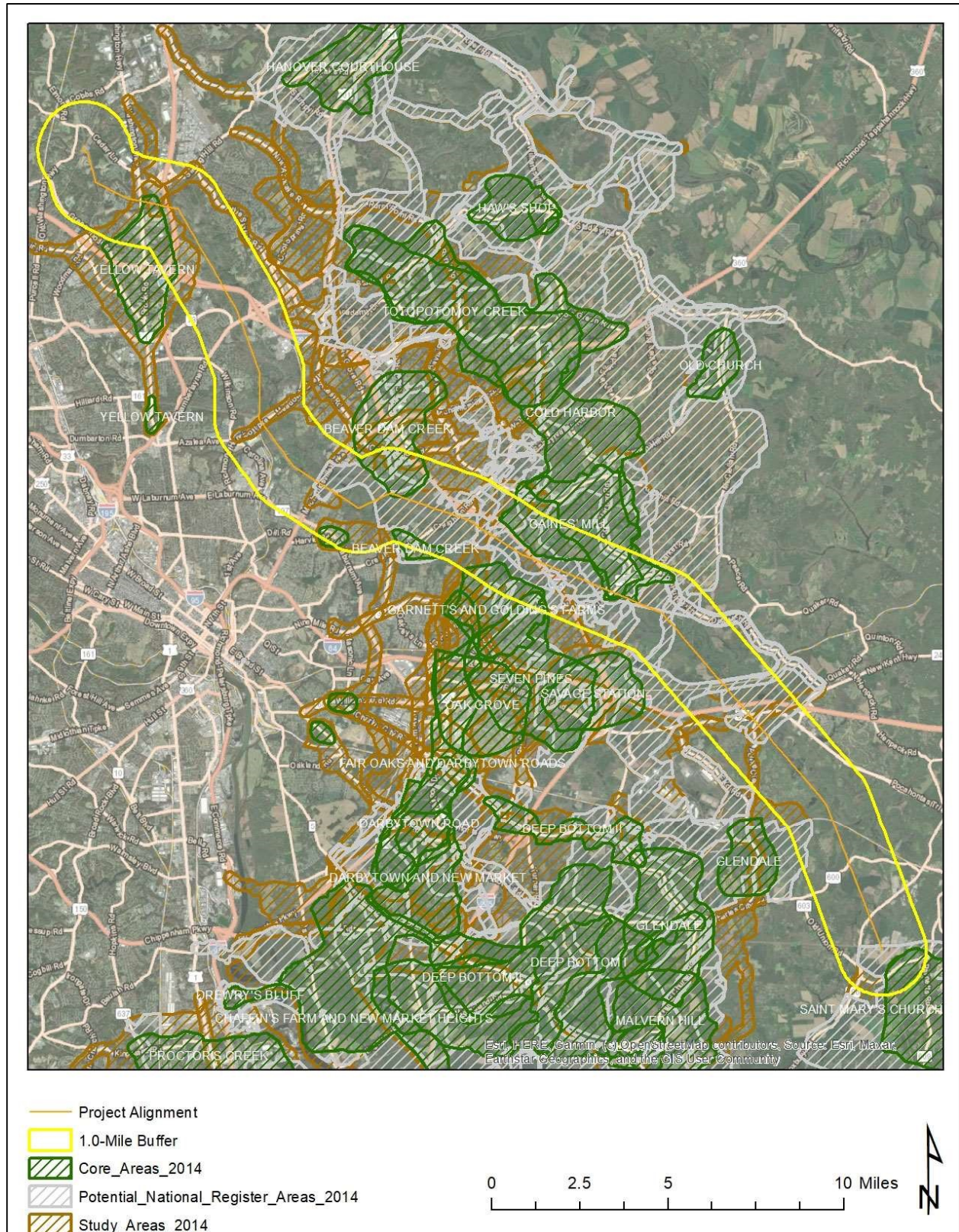


Figure 4-7: ABPP-delineated battlefields in relation to the project and one-mile buffer. Source: VCRIS

## 5. RESULTS OF FIELD RECONNAISSANCE

In accordance with the VDHR guidelines for assessing impacts of proposed electric transmission lines on historic resources, considered architectural properties identified within the VDHR-defined study tiers around the project alignment were field verified for existing conditions and photo documented (Table 5-1 and Figure 5-1).

Inspection and analysis of the setting around the resource and views towards the project route alternatives were also conducted to assess potential project impacts. For the purposes of this analysis, an impact is one that alters, either directly or indirectly, those qualities or characteristics that qualify a particular property for listing in the NRHP and does so in a manner that diminishes the integrity of a property's materials, workmanship, design, location, setting, feeling, and/or association. With respect to transmission lines, direct impacts typically are associated with ground disturbance resulting from ROW clearing and structure construction. Indirect impacts typically are associated with the introduction of new visual elements or changes to the physical features of a property's setting or viewshed.

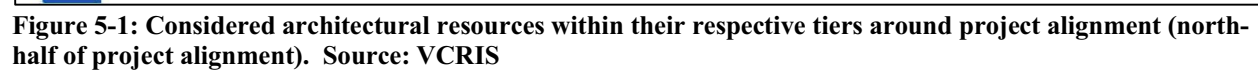
The results of the field reconnaissance and assessment are summarized in the following pages.

**Table 5-1: Considered architectural resources and distance to project.**

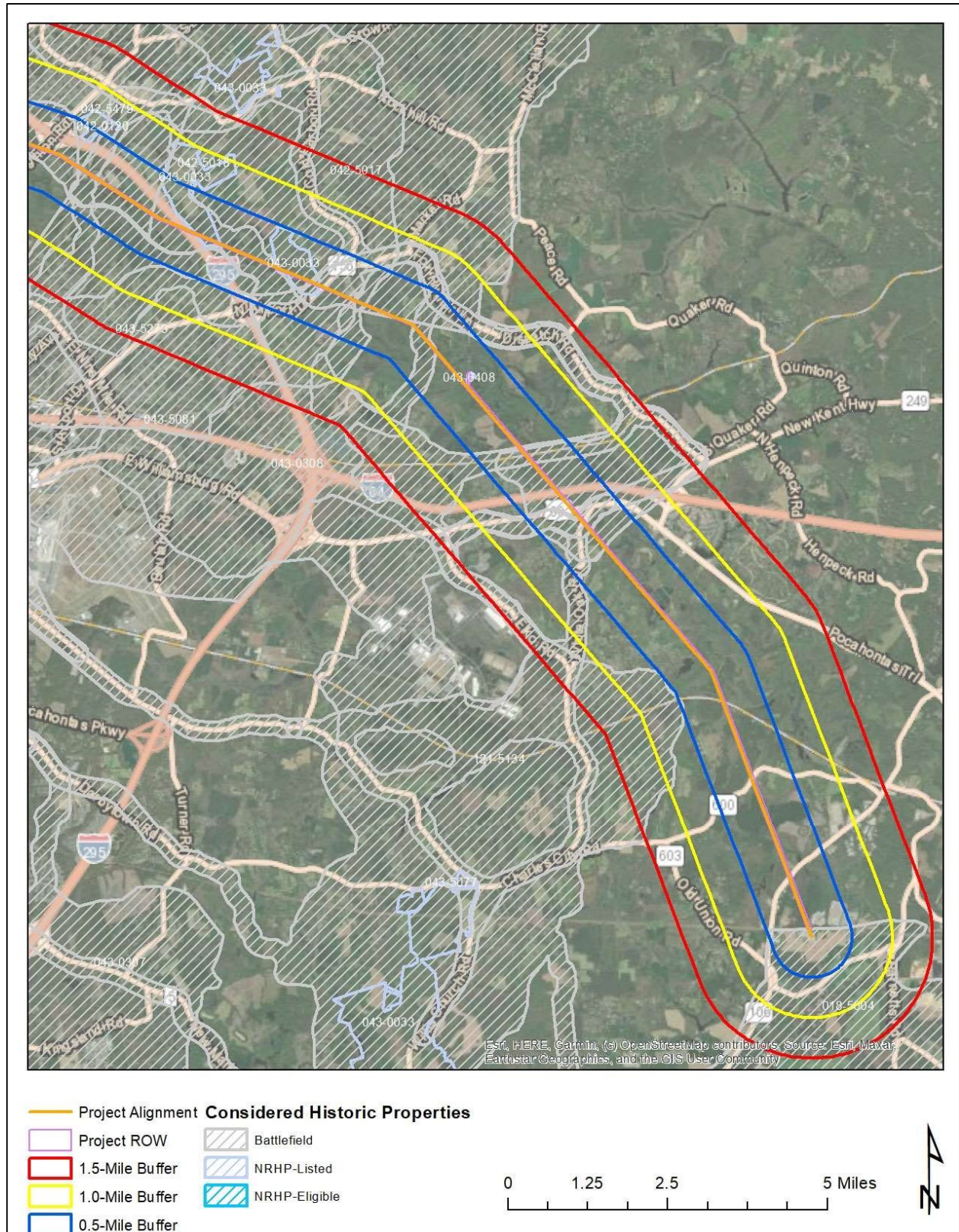
VDHR #	Resource Name/ Address	NRHP-Status	Distance from project
007-5513	Chesapeake and Ohio Railroad (Historic), Louisa Railroad (Historic), Virginia Central Railroad (Historic)	NRHP-Eligible	Adjacent to ROW
018-5004	Nance's Shop (Historic), Saint Mary's Church Battlefield (Current Name), Samaria Church (Historic)	Battlefield	Directly Crossed by Chickahominy Substation
042-0120	Hogan House (Current), House, 6279 Powhite Farm Drive (Function/Location), Selwyn (Historic/Current)	NRHP-Listed	~0.32 Mile
042-0137	Oakley Hill (NRHP Listing)	NRHP-Listed	~0.92 Mile
042-5017	Cold Harbor Battlefield (Current Name), Second Cold Harbor (Historic)	Battlefield	Directly Crossed
042-5018	First Cold Harbor Battlefield (Historic), Gaines' Mill Battlefield (Current Name)	Battlefield	Directly Crossed
042-5022	Battle of Bethesda Church (Historic), Battle of Crumps Creek (Historic), Battle of Hanover town (Historic), Battle of Shady Grove Road (Historic), Totopotomoy Creek Battlefield (Current Name)	Battlefield	~0.90 Mile
042-5479	Beaver Dam Creek Battlefield (Current Name)	Battlefield	Directly Crossed
042-5509	Ashland UDC Jefferson Davis Highway Marker (NRHP Listing), Lee Chapter UDC Jefferson Davis Highway Commemorative Marker (Current Name), UDC Commemorative Highway Marker, Jefferson Davis Highway (Function/Location)	NRHP-Listed	~0.59 Mile
043-0033	Richmond National Battlefield Park (NRHP Listing)	NRHP-Listed	Directly Crossed
043-0175	Ravenswood (Current)	NRHP-Eligible	~0.30 Mile
043-0307	Battle of Chaffin's Farm, New Market Road (Historic/Location), New Market Heights Battlefield (Historic/Current)	Battlefield	~0.33 Mile
043-0308	Savage Station Battlefield (Historic/Current)	Battlefield	Directly Crossed
043-0800	Antique Carousel, Virginia Center Commons	NRHP-Eligible	~0.15 Mile



VDHR #	Resource Name/ Address	NRHP-Status	Distance from project
043-5077	Frazier's Farm (Historic), Glendale Battlefield (Current Name), Glendale Battlefield (Historic), Nelson's Farm (Historic)	Battlefield	~0.48 Mile
043-5081	Fair Oaks (Historic), Seven Pines Battlefield (Historic)	Battlefield	Directly Crossed
043-5108	Yellow Tavern Battlefield (Historic)	Battlefield	Directly Crossed
043-5273	Battle of Garnett's and Golding's Farm (Historic/Location)	Battlefield	~0.06 Mile
043-5347	Richmond-Ashland Trolley Line (Historic)	NRHP-Eligible	Directly Crossed
043-6408	Indian Springs Farm Site 44HE1065 (NRHP Listing), Wilson Site (Historic)	NRHP-Listed	~0.04 Mile
121-5134	Chesapeake and Ohio Railroad (Historic), CSX Railroad (Current Name)	NRHP-Eligible	Directly Crossed







**Figure 5-2: Considered architectural resources within their respective tiers around project alignment (south-half of project alignment). Source: VCRIS**

**VDHR# 007-5513**  
**Virginia Central Railroad**

The Virginia Central Railroad, originally the Louisa Railroad, was chartered in 1836 to link the western part of the state with eastern cities. The chief engineer of the project was Claudius Crozet, Principle Engineer for the Virginia Board of Public Works. Its initial configuration extended twenty-two miles from Frederick's Hall to Taylorsville, now Doswell, where it connected with the Richmond, Fredericksburg & Potomac Railroad. By 1850, it reached Charlottesville and was renamed the Virginia Central Railroad. It reached as far west as Clifton Forge by the onset of the Civil War, during which it proved to be an important railroad for the Confederacy, transporting troops and supplies between the eastern and western portions of the state. The railroad was badly damaged near the end of the war but was rebuilt during reconstruction. Eventually, it merged with the Covington and Ohio Railroad to form the Chesapeake and Ohio Railroad, which was later consolidated with several other large railroads in the 1980s to form CSX Transportation.

The Virginia Central Railroad is associated with the development of transportation and commerce in Virginia, as it facilitated trade between the eastern and western portions of the state. Although the line has been altered through the replacement of materials and the expansion of the original corridor, it continues to convey historic associations with those patterns in Virginia history. It is also significant for its association with the history of the Civil War. Additionally, the railroad is significant for its association with Claudius Crozet. As such, it is considered potentially eligible for listing in the NRHP under Criteria A and B.

As a *potentially NRHP-eligible* resource located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The project area directly abuts the recorded portion of the Virginia Central Railroad, although the extant rail corridor it is associated with extends beyond the recorded limits and is directly crossed by the project alignment. As the transmission line is suspended above the railroad corridor, with no structures or anticipated work within the railroad corridor itself, there will be no direct impact to the resource.

To assess potential indirect, and specifically visual impacts, a site visit was made to the recorded portion of the railroad to inspect the existing setting and viewshed with emphasis on views towards the project and associated improvements. Photographs were taken from the publicly-accessible locations along and in the vicinity of the railroad towards the project alignment to document current conditions, lines of sight, and the extent of visibility of existing infrastructure. 3D model renderings were also prepared from the Meadowbridge Road/railroad crossing to model the proposed appearance of the replacement structures in relation to existing structures.

Although the Virginia Central Railroad historically extended hundreds of miles across the region, just a short segment of the corridor as recorded is located within the study tier for this project and subject to assessment as part of this effort. This includes a short length of corridor at the crossing with Meadowbridge Road. While the project alignment is suspended across the railroad, the nearest structures are roughly 250 feet away to the north and 650 feet away to the south.

Inspection was conducted from along Meadowbridge Road at its intersection with the railroad corridor. From this vantage point, an extensive amount of infrastructure associated with the project transmission line, as well as additional transmission lines in the shared ROW are openly visible in

both directions. Because the project alignment makes a turn just beyond the visible structure to the north, the transmission line and other existing structures quickly become screened by vegetation bordering the ROW in this direction, while more of the existing line and infrastructure remain visible as it extends to the south of the railroad.

The existing transmission line structures located within the viewshed of the railroad (one-half mile) currently range from 103 to 135 feet tall, and will be replaced with structures that will range from 127 to 157 feet tall, resulting in an increase of 20 to 29 feet for individual structures (Table 5-2). The existing steel lattice structures will generally be replaced on a one-to-one basis with steel H-frame structures in roughly the same locations with the exception of the angle structure that will be replaced with a 3-pole structure.

**Table 5-2: Existing and proposed heights of structures within one-half mile of the Virginia Central Railroad.**

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/317	134	157	23
557/318	135	155	20
557/319	103	127	24
557/320	108	132	24
557/321	125	154	29

With this increase in height, it is anticipated that there will be a change in appearance of the structures from the immediate vicinity where many are already visible, however, the change in structure type from steel lattice to H-frame is expected to reduce the profile and change in visibility. Due to the existing vegetation that borders both sides of the railroad corridor and the project ROW, the increase is not anticipated to introduce any substantial new or additional visibility of the line and individual structures from vantage points beyond the crossing. The new structures will also be seen in conjunction with, and remain shorter, than other existing transmission structures in the shared ROW. It is further noted that the railroad is an active use for commercial/freight transport, and therefore not accessible to the public. This was confirmed with 3D model renderings showing the replacement structures will generally remain visible where existing structures are already visible, and will be screened where the existing structures are already screened by vegetation.

As such, the project will not introduce a substantial change in setting or viewshed of or from publicly-accessible vantage points along the Virginia Central Railroad. The new structures will remain shorter than other existing transmission structures in the shared ROW, and not be visible from any new or additional vantage points than where the current structures are already visible. Therefore, it is D+A's recommendation that the Chickahominy-Elmont Project will *occur within viewsheds that have existing transmission lines*, and within *views that have been partially obstructed by intervening topography and vegetation*, and will therefore result in no more than a **minimal impact** to the Virginia Central Railroad per VDHR's impact characterization scale.

Figure 5-3 illustrates the location of the Virginia Central Railroad in relation to the project alignment and study buffers, with the location and direction of representative photographs and 3D renderings. Representative photographs and renderings are provided in Figure 5-4 through Figure 5-7.



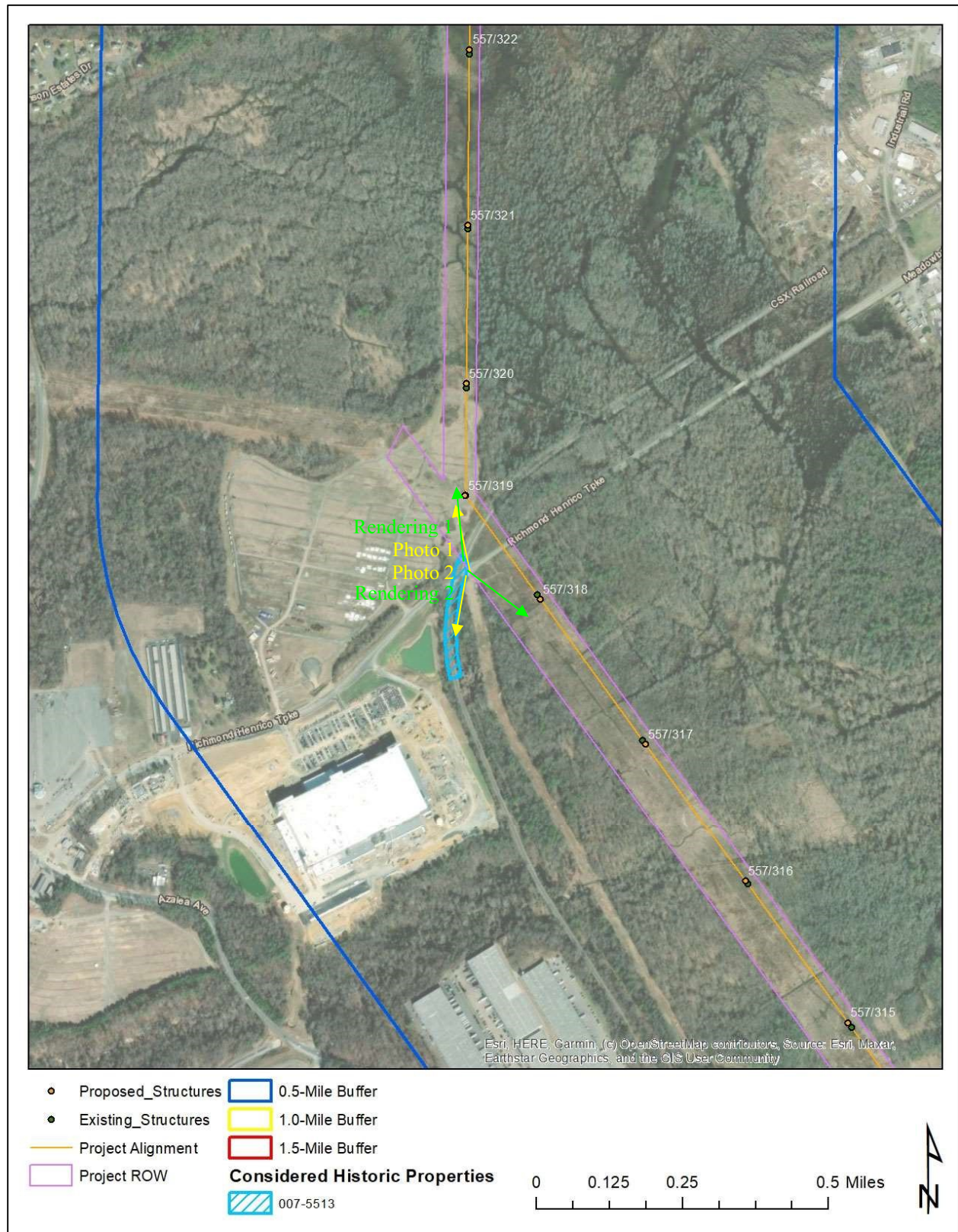
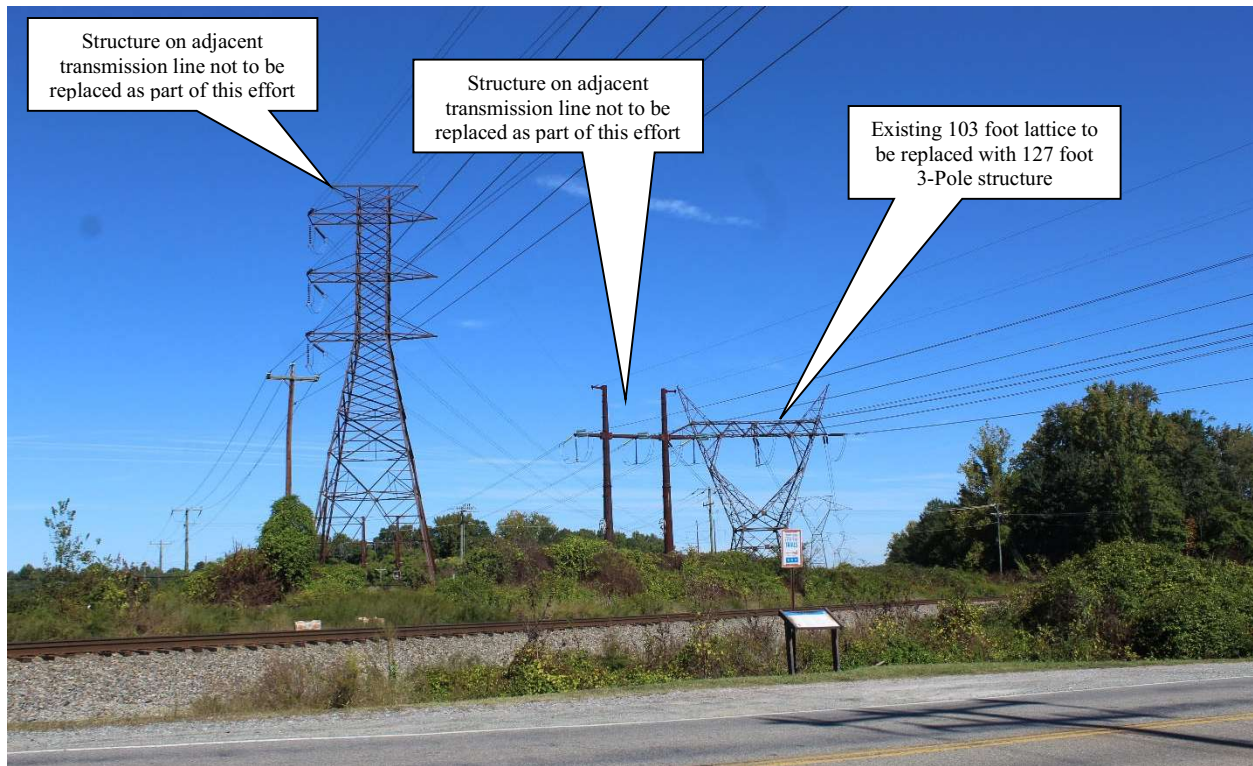


Figure 5-3: Virginia Central Railroad in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



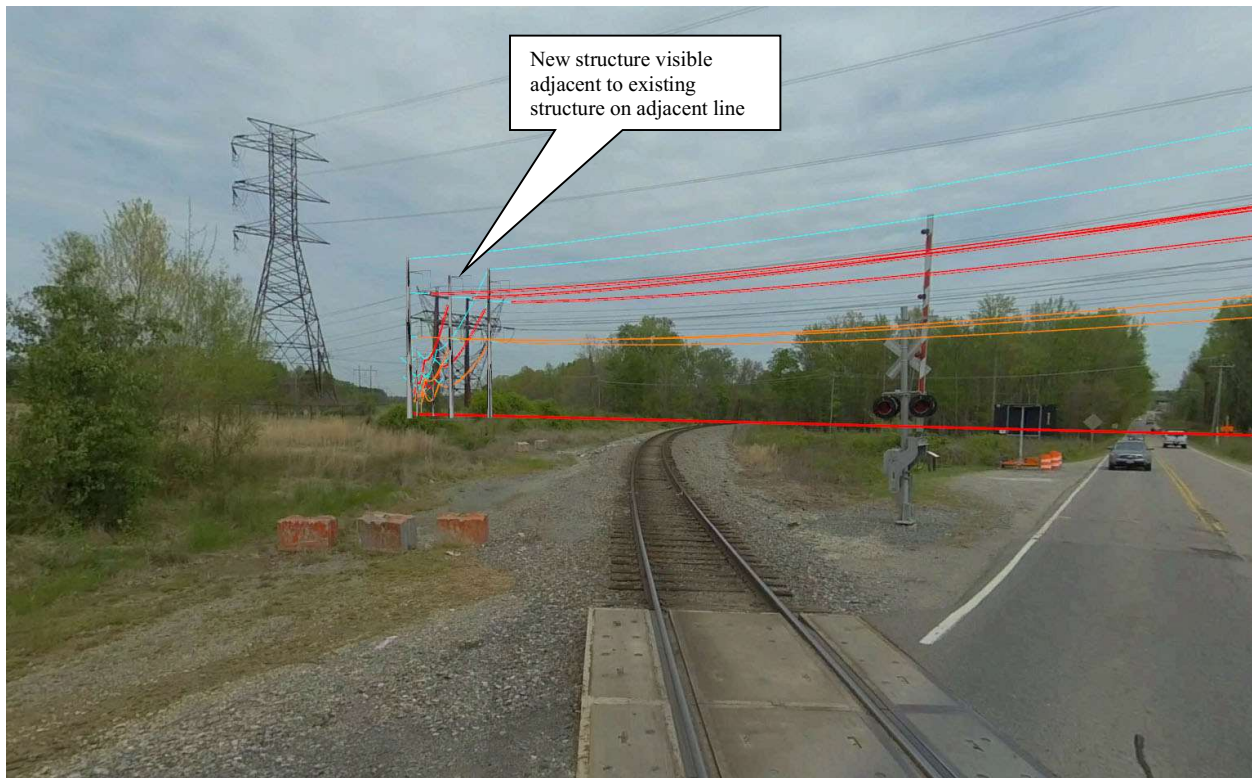


**Figure 5-4: Photo location 1- View from Meadowbridge Road just east of railroad corridor, facing northeast.**

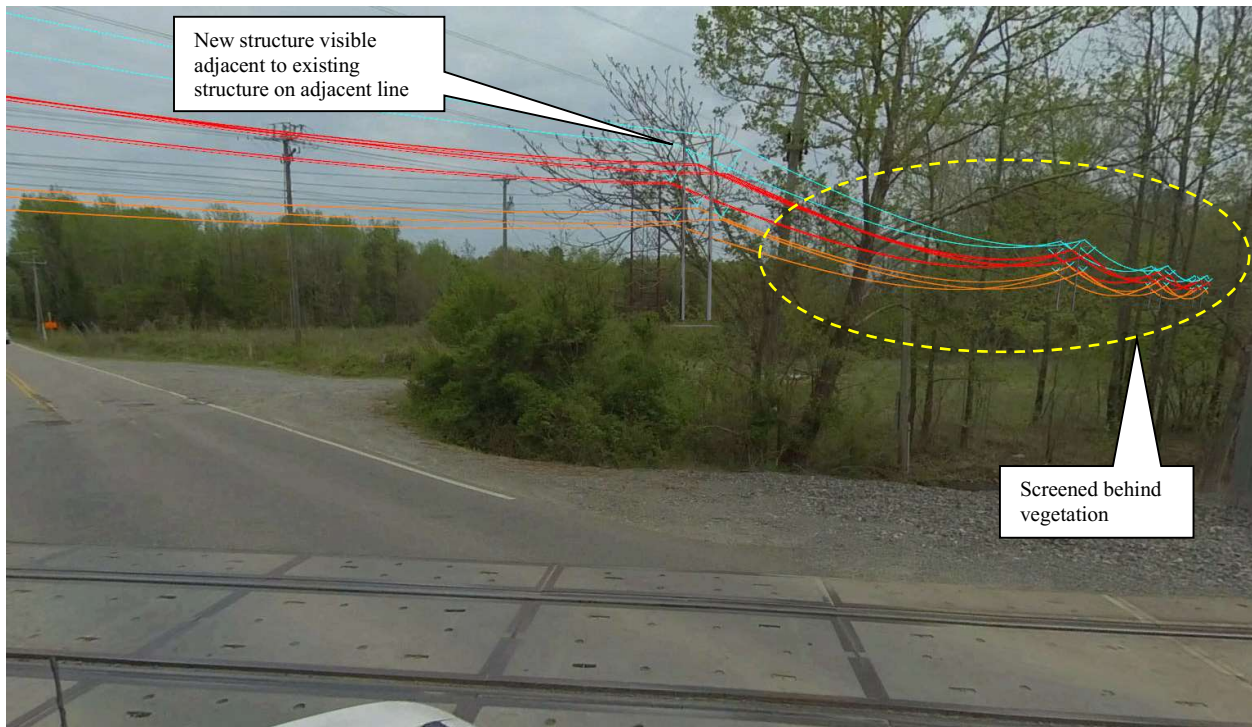


**Figure 5-5: Photo location 2- View from Meadowbridge Road at railroad crossing, facing south.**





**Figure 5-6: Rendering 1 - model of proposed structures and transmission line from Meadowbridge Road at railroad crossing (new 3-pole structure visible). Source: Google Streetview**



**Figure 5-7: Rendering 2 - model of proposed structures and transmission line from Meadowbridge Road at railroad crossing (one structure partially visible through vegetation. Others to remain screened by treeline). Source: Google Streetview**

**VDHR# 018-5004**

**Saint Mary's Church Battlefield**

The Saint Mary's Church Battlefield consists of a 6.5-mile long battlefield along Routes 603, 609, and 602. At one point, it contained a collection of landmarks, hospitals, and possible burial sites, but all have been lost. Other key landmarks within the battlefield include Union and Confederate breastworks, St. Mary's, Salem, and Hopewell Churches. The battlefield has generally maintained its rural character, consisting of mixed agricultural and wooded areas with light development including scattered homes and farms.

The Battle of Saint Mary's Church was fought in 1864 as part of Grant's Overland Campaign. When Major General Wade Hampton's Confederate cavalry attempted to cut off Major General Philip Sheridan's U.S. cavalry returning from their raid on Trevilian Station, Sheridan delayed the cavalry in order to protect the supply train under his protection. For its association with Civil War history, the battlefield is considered potentially eligible for listing in the NRHP under Criterion A.

As a ***battlefield*** located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Saint Mary's Battlefield occupies a large landscape and only a small portion of the northern edge is located in proximity to the project. The project area extends directly into the limits of the battlefield where the southern terminus of the project and the existing Chickahominy substation are located. Only the substation itself is located within the battlefield, while the ROW in which the transmission line to be rebuilt extends out of the substation and away from the battlefield. Because there will be work associated with the project within the limits of the substation, nor will the first structure leading out of proposed for replacement as part of the project, there will be no direct impact to any intact landscape or features of the battlefield.

To assess potential indirect, and specifically visual impacts, a site visit was made to the portion of the battlefield within the vicinity of the project to inspect the existing setting and viewshed with emphasis on views towards the project and associated improvements. Photographs were taken from the publicly-accessible locations towards the project alignment to document current conditions, lines of sight, and the extent of visibility of existing infrastructure. Photo simulations were also prepared from representative vantage points.

Because the project does not involve the replacement of any structures within the Chickahominy substation or the first structure beyond, just two transmission structures to be replaced as part of the project are located within the viewshed (one-half mile) of the battlefield. The landscape of the battlefield in this area is characterized by a mix of open agricultural field dotted by homes and small farms, some light industrial and commercial properties, and existing electrical transmission infrastructure. A large substation is located at the edge of the battlefield boundaries along Chambers Road. The project corridor extends away from the battlefield to the north, but another existing transmission line continues from the substation south, through the battlefield, while yet another transmission line extends in an east-west alignment through the substation and along the edge of the battlefield.

This portion of the battlefield is considered “study area” by the NPS ABPP. The nearest portion of “core area” where combat occurred is roughly 0.33 mile to the southeast of the substation and terminus of the project.

Inspection from a variety of vantage points throughout the portion of the battlefield within the study tiers revealed that the existing transmission line to be rebuilt is generally not visible from public vantage with the exception of from Chambers Road along the northern edge of the battlefield where the project corridor crosses the road just before terminating at the Chickahominy substation on the south side of the road. From this vantage point, an extensive amount of electrical infrastructure is visible, including transmission lines extending in and out of the substation in all directions. The existing line to be rebuilt is located within a ROW shared by another transmission line that is substantially taller. Inspection from vantage points further within the boundary of the battlefield, including along Old Union Road revealed that the existing transmission line to be rebuilt is generally not visible due to the distance and intervening vegetation. However, other existing transmission lines that cross the landscape are visible from a variety of vantage points.

The two existing transmission line structures located within the one-half mile viewshed of the battlefield are currently 113 and 128 feet tall, and will be replaced with structures that will be 137 and 153 feet tall, resulting in an increase of 24 and 25 feet respectively (Table 5-3). The existing steel lattice structures will both be replaced on a one-to-one basis with steel H-frame structures in roughly the same locations.

**Table 5-3: Existing and proposed heights of structures within one-half mile of Saint Marys Church Battlefield.**

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/228	113	137	24
557/229	128	153	25

With the increase in height, it is not anticipated that visibility of the project will change dramatically. The Chickahominy substation and next adjacent transmission structure will remain as is while just two structures set further away will be replaced. Both structures will remain shorter than the adjacent transmission line in the shared ROW. Neither are anticipated to rise above the treelines or be visible from any vantage points at further distances where the existing line is currently not visible. This was confirmed with 3D model rendering and photo simulation from representative locations in the battlefield.

As such, the project will introduce a slight change in visibility of the transmission line to be rebuilt from discrete vantage points within the battlefield, however, it will remain screened from most locations. Where visible, the change in height will be indistinguishable, as it will remain substantially shorter than the adjacent transmission line in the shared ROW. It is therefore D+A’s opinion that the project will have no more than a *minimal impact* on the Saint Mary’s Church Battlefield per VDHR’s impact characterization scale.

Figure 5-8 depicts the overall boundary of the Saint Marys Church Battlefield in relation to the project alignment and viewshed buffers, and Figure 5-9 provides a detail of the portion of the battlefield in proximity to the project, with the location and direction of all representative



photographs and photo simulations. Figure 5-10 through Figure 5-38 provide representative photographs from the battlefield towards the project, as well as 3D renderings and photo simulations.

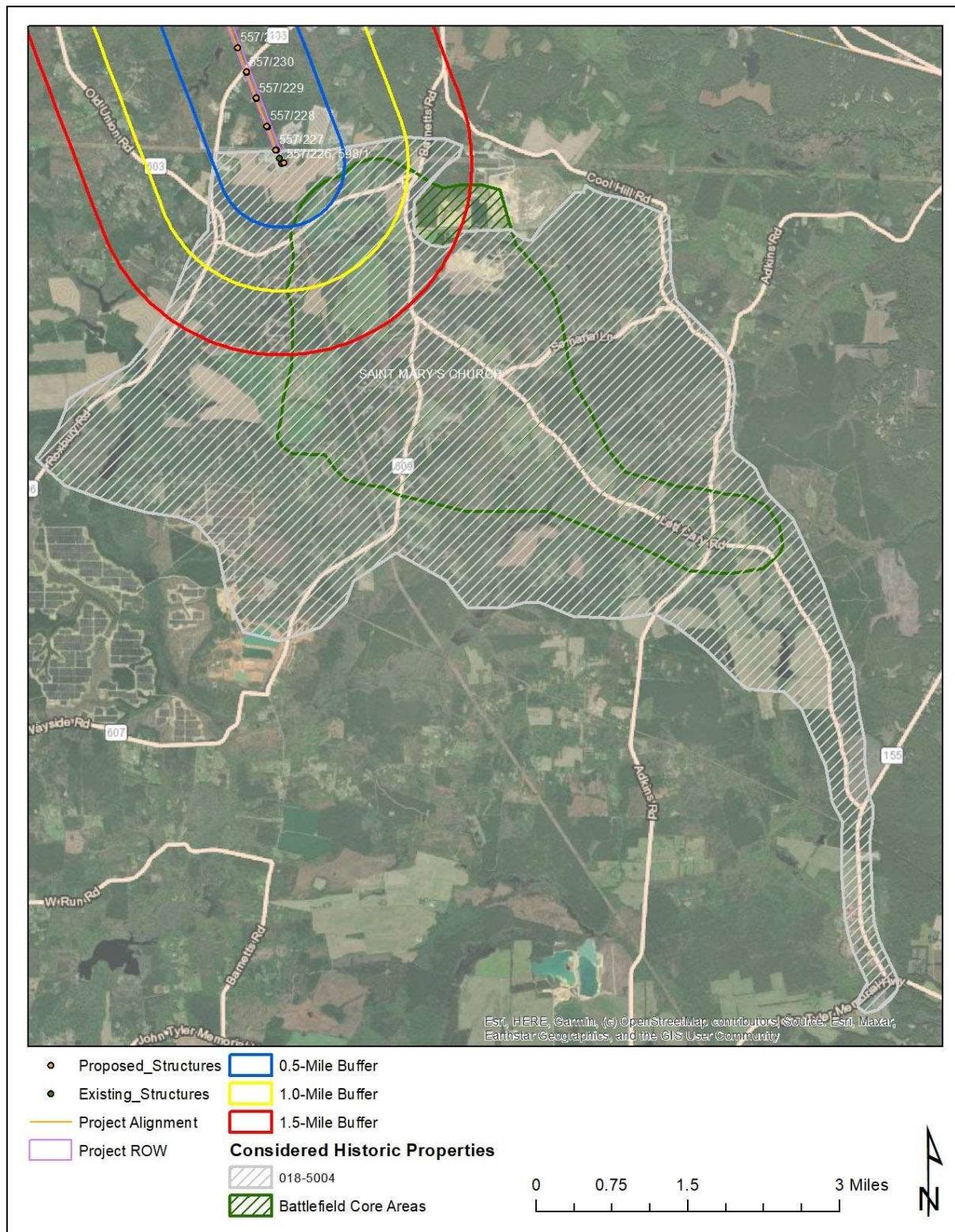
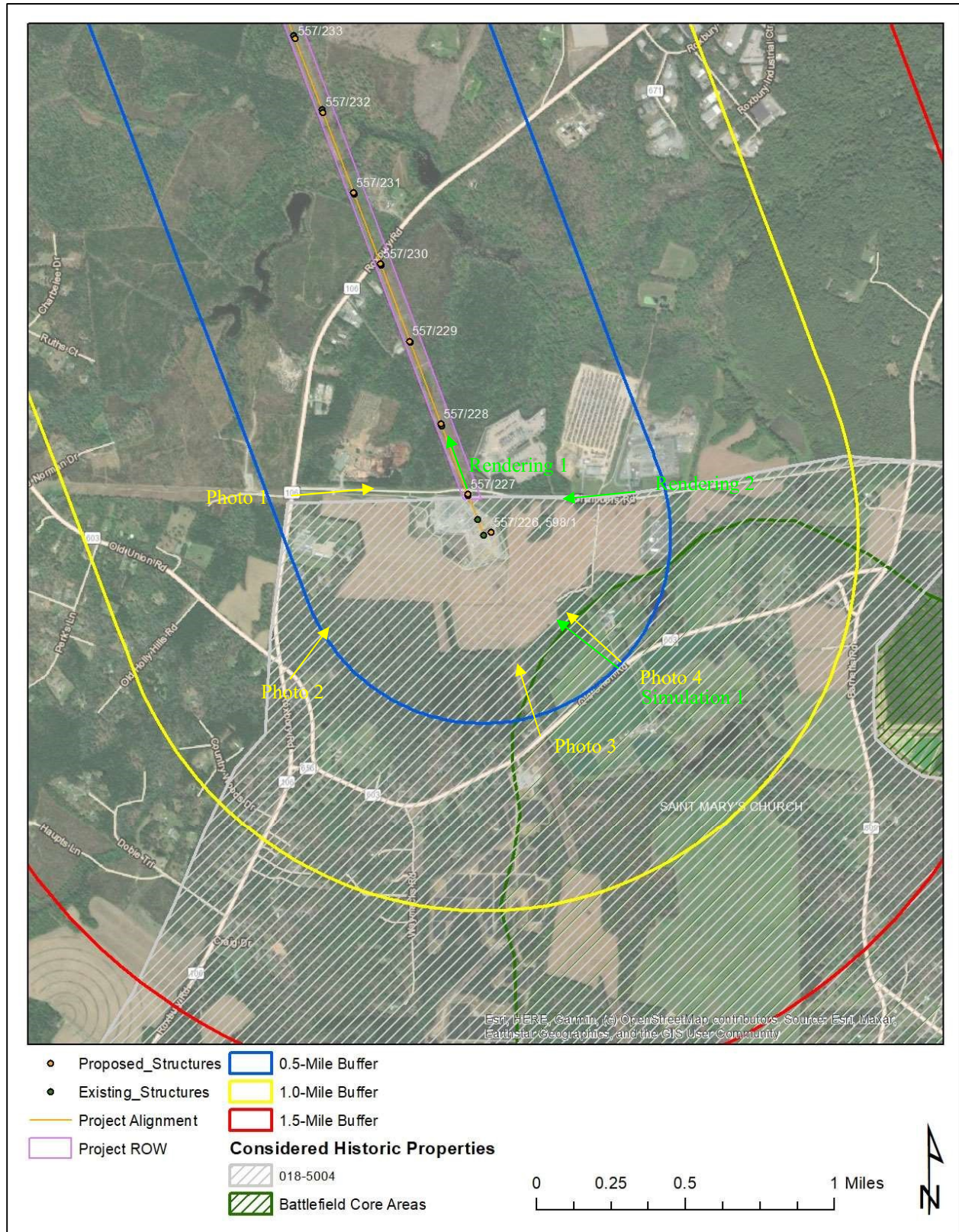


Figure 5-8: Overall limits of the Saint Mary's Church Battlefield with ABPP tiers in relation to the project.





**Figure 5-9: Detail of the Saint Mary's Church Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.**



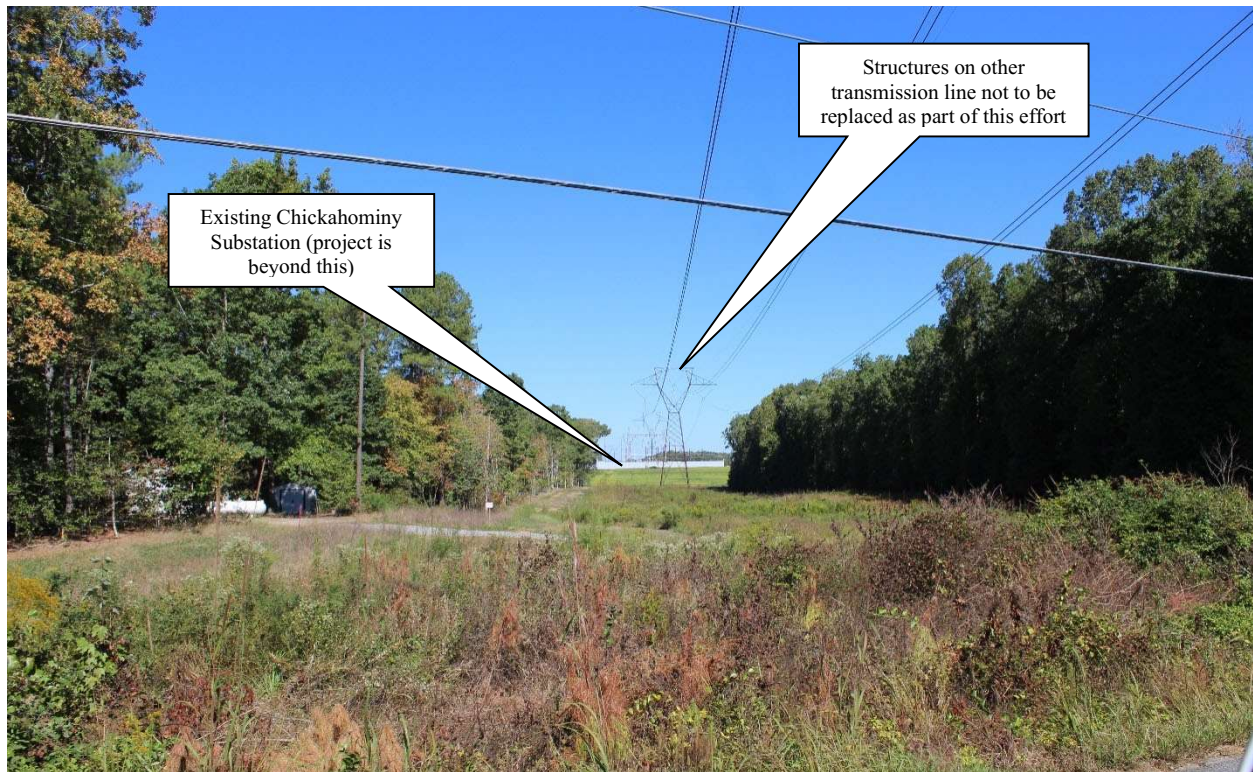


**Figure 5-10: Photo location 1- View from Roxbury Road at ROW for a separate transmission line, facing east.**



**Figure 5-11: Photo location 2- View from Old Union Road just east of Roxbury Road, facing northeast.**





**Figure 5-12: Photo location 3- View from Old Union Road within transmission line ROW south of substation, facing northeast.**



**Figure 5-13: Photo location 4- View from Old Union Road, facing northwest.**





**Figure 5-14: Rendering 1 - model of proposed structures and transmission line from Chambers Road at edge of battlefield, facing north (one structure visible adjacent to a taller structure not included in this project). Source: Google Streetview**



**Figure 5-15: Rendering 2 - model of proposed structures and transmission line from Chambers Road at edge of battlefield, facing west (all project components remain beneath treeline). Source: Google Streetview**





**Figure 5-16: Photo Simulation 1 – Existing (above) and proposed (below) view from Old Union Road, facing northwest. All structures shown in yellow to remain screened behind vegetation.**

**VDHR# 042-0120**  
**Hogan House**

Hogan House, located at 6279 Powhite Farm Drive, was built circa 1820. The house represents a combination of two different styles, with a Federal-style original block and a later Greek Revival addition. The frame structure is laid out in a single-pile, central passage plan with a one-story, three-bay Greek Revival-style front porch and a Federal-style rear porch. It is topped by a gable roof sheathed in standing-seam metal and flanked by two brick exterior end chimneys. Fenestration on the structure includes nine-over-nine, six-over-six, and nine-over-six double-hung wood sash windows. The structure has experienced little alteration and maintains a high degree of architectural integrity.

Located in eastern Hanover County, the Hogan House stands on a ridge overlooking the Chickahominy River and surrounded by open farm fields and several Civil War battlefields. The house is associated with two of these battlefields, having been used as the Union headquarters and later the Confederated headquarters as well as a hospital during McClellan's Peninsula Campaign. It also served as a hospital during the 1864 Battle of Cold Harbor. Additionally, the house is significant as an excellent example of a Federal-Greek Revival transitional style, illustrating the evolution of building styles in Hanover County. In consideration of this, the site was listed in the NRHP in 2003 under Criteria A and C.

As an *NRHP-listed* resource located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The project alignment is located approximately 0.32 mile away from the Hogan House property at the nearest point. As such, there will be no direct impact to the resource.

To assess potential indirect, and specifically visual impacts, a site visit was made to the property to inspect the existing setting and viewshed with emphasis on views towards the project and associated improvements. Photographs were taken from the public right of way towards the project alignment to document current conditions, lines of sight, and the extent of visibility of existing infrastructure. 3D model renderings were prepared to model the proposed appearance of the replacement structures in relation to existing structures.

The Hogan House is situated near the center of a T-shaped parcel, which is approximately 60 acres. The project alignment is to the southwest of the property, on the southwest side of Interstate 295. The project alignment is roughly 0.32 mile away from the property at its closest point, with the house being approximately 0.5 mile from the nearest structures to be replaced as part of this project. In the southernmost corner of the property is a dense concentration of mature trees, screening the house from the interstate and existing transmission corridor.

Inspection was conducted from along Powhite Farm Drive along the front of the property. From this vantage point, the infrastructure associated with the project, as well as the existing transmission structures to be replaced as part of the project are not visible. The transmission line is screened from the property by vegetation concentrated along property lines.

The existing transmission line structures located within the viewshed of the Hogan House (one-half mile) currently range from 102 to 122 feet tall and will be replaced with structures that will range

from 127 to 147 feet tall, resulting in an increase of 24 to 29 feet for individual structures (Table 5-4). The existing steel lattice structures will generally be replaced on a one-to-one basis with steel H-frame structures in roughly the same location.

**Table 5-4: Existing and proposed heights of structures within one-half mile of Hogan House.**

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/292	102	127	25
557/291	105	129	24
557/290	108	137	29
557/289	118	147	29
557/288	122	147	25

Even with this increase in height, it is not anticipated that there will be any visibility of the project structures from any vantage points within or in proximity to the Hogan House property. Due to existing vegetation that separates the property from the Interstate 295 right of way, all associated improvements will remain screened behind and beneath the vegetation.

As such, the project will not introduce any change in setting or viewshed or from the Hogan House, or publicly accessible vantage point along Powhite Farm Drive. Therefore, it is D+A's opinion that the Chickahominy-Elmont Project *will not be visible from the property* will therefore result in ***no impact*** to the Hogan House per VDHR's impact characterization scale.

Figure 5-17 illustrates the location of the Hogan House in relation to the project alignment and study buffers, with the location and direction of representative photographs and 3D renderings. Representative photographs and renderings are provided in Figure 5-18 through Figure 5-21.



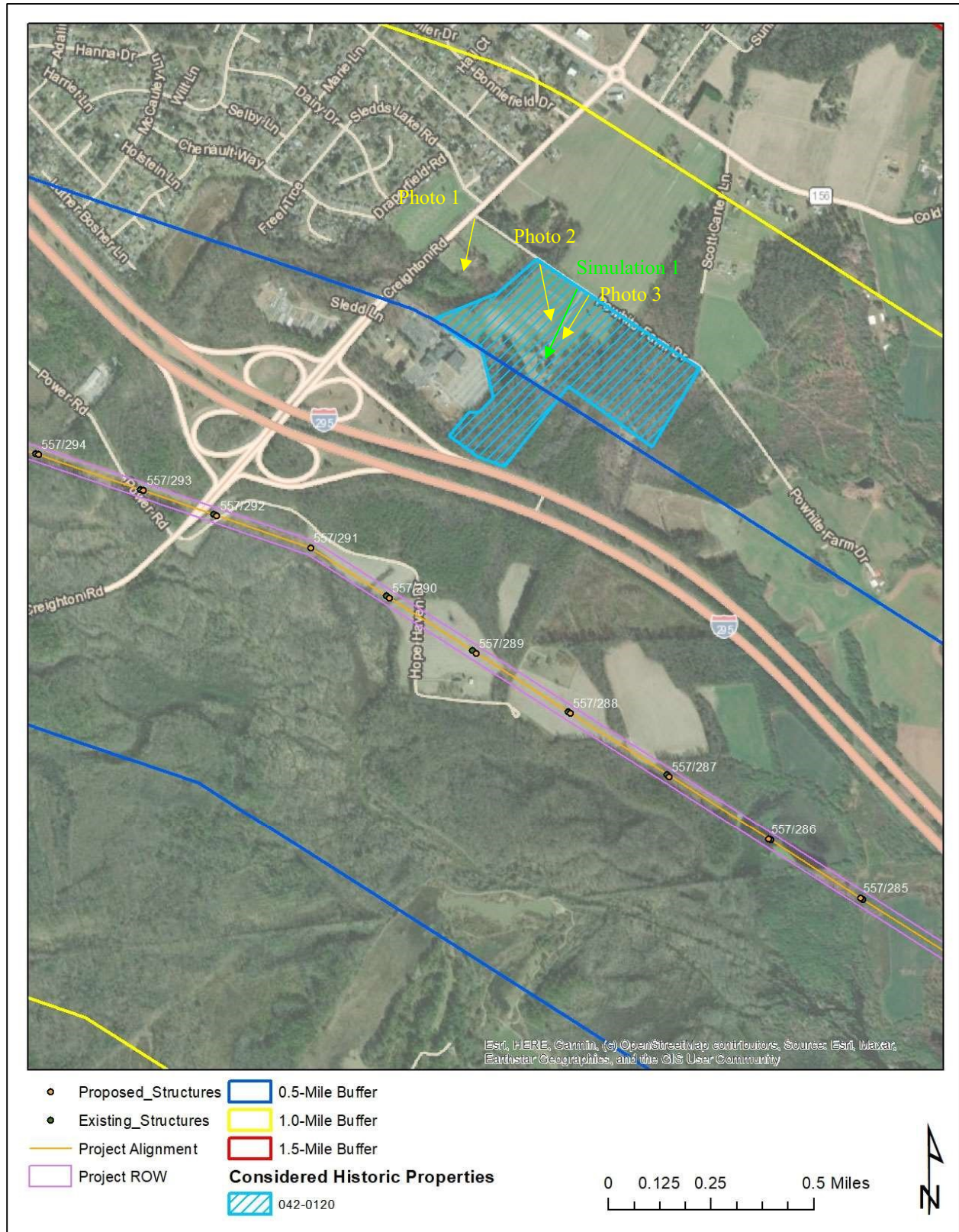


Figure 5-17: Hogan House in relation to the project alignment with locations and directions of representative photographs shown in yellow and simulations in green.



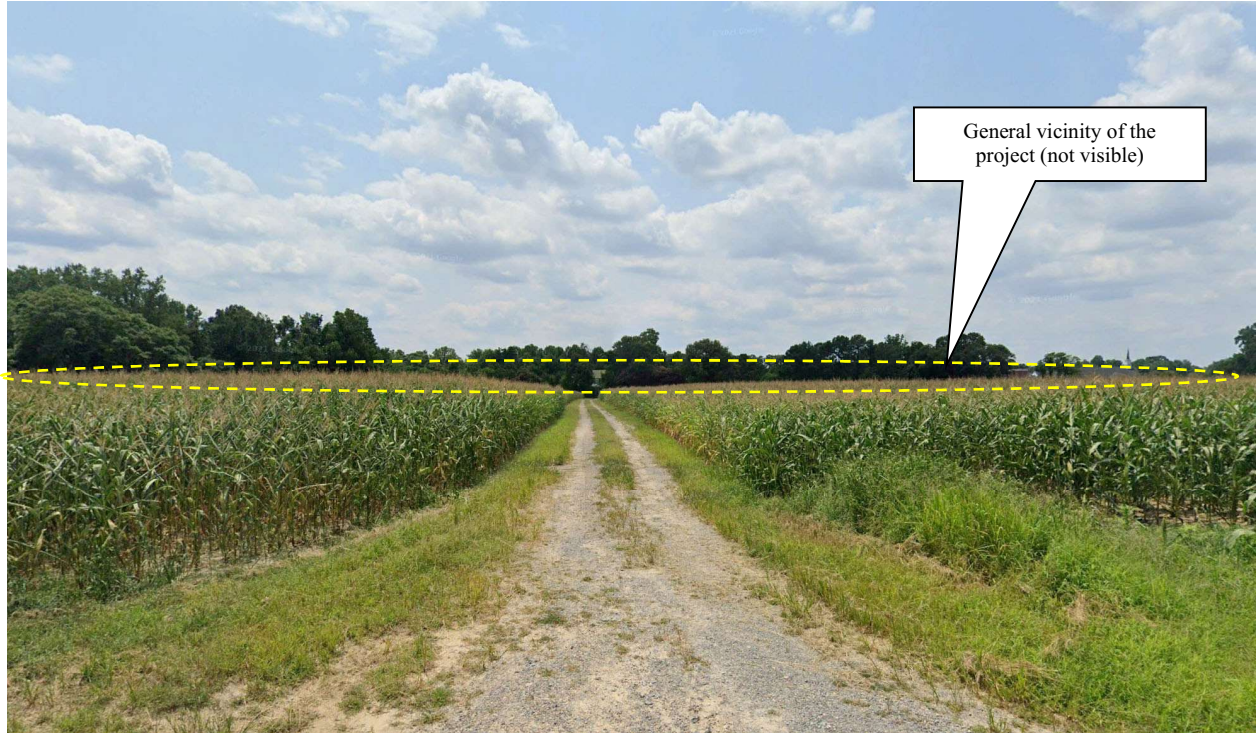


**Figure 5-18: Photo location 1- View from Powhite Farm Road at Creighton Road, facing south.**



**Figure 5-19: photo location 2 – View from Powhite Farm Drive, facing southeast.**





**Figure 5-20: photo location 3 – View from Powhite Farm Drive, facing south.**





**Figure 5-21: Photo Simulation 1 – Existing (above) and proposed (below) view from Hogan House property, facing south. All structures shown in yellow to remain screened behind vegetation.**

**VDHR# 042-0137**  
**Oakley Hill**

The main plantation house at Oakley Hill was built circa 1839 and stands in the middle of a 100-acre parcel surrounded by open fields and containing several large, old oak trees. The frame I-house exhibits a Greek Revival style and is laid out in a single-pile, central passage plan. Originally a one-and-a-half-story house, it was raised to a full two-stories in the 1850s. The house rests on a continuous brick foundation and is topped by a metal-sheathed side-gable roof that is pierced by two brick interior chimneys on either end of the gable. The weatherboard siding is interrupted by six-over-six double-hung wood sash windows. A one-story, three-bay porch spans nearly the entire length of the front elevation. Although is of modest design and ornamentation, it maintains a relatively high degree of architectural integrity. Some interior spaces have been renovated but the exterior of the house remains largely unaltered. Also included on the property are a rare two-unit servants' house and an early smokehouse.

Originally built by the Sydnor family as the main house of a small, rural plantation, the site is now surrounded by modern housing developments. It's simple form and design are typical of homes on small, post-colonial plantations in the counties around Richmond and, as such, it represents the persistence of vernacular forms, particularly the I-house, in rural Virginia. Additionally, it is significant for being one of the few remaining plantation houses in an area where many have been lost to modern development. As such, it was listed in the NRHP in 1994 under Criterion C for its architectural significance.

As an *NRHP-listed* resource located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The project alignment is located approximately 0.9 mile away from the Oakley Hill property at the nearest point. As such, there will be no direct impact to the resource.

To assess potential indirect, and specifically visual impacts, a site visit was made to the property to inspect the existing setting and viewshed with emphasis on views towards the project and associated improvements. Photographs were taken from the public right of way towards the project alignment to document current conditions, lines of sight, and the extent of visibility of existing infrastructure. Photo simulations were also prepared from representative vantage points.

Oakley Hill is situated on a roughly 12-acre property within what is now a suburban residential neighborhood off of Cold Harbor Road. The home is situated towards the southern end of the tear-drop shaped parcel with modern homes lining the property to both sides. The project alignment generally extends through the landscape to the southwest of the property, across Interstate 295. The alignment is roughly 0.9 mile away from the property at its closest point, while the home is approximately 1.02 mile from the new structures. The landscape between the property and the project is characterized by suburban residential development set on wooded lots between the property and I-295 with additional undeveloped wooded areas between I-295 and the project.

Inspection was conducted from along Ancient Oak Drive, Cedar Berry Road, and Bartletts Bluff Road lining both sides and the rear of the property. From these vantage points there is no visibility of the existing transmission line or I-295 in the foreground. The vegetation and development on the

adjacent properties generally inhibits any distant views in any direction, including towards the project.

There are no existing transmission structures to be replaced as part of the project within one mile of the house, but the three existing transmission line structures located within one mile of the property currently range from 123 to 128 feet tall, and will be replaced with structures that will range from 150 to 152 feet tall, resulting in an increase of 24 to 29 feet for individual structures (Table 5-5). The existing steel lattice structures will all be replaced on a one-to-one basis with steel H-frame structures in roughly the same locations.

**Table 5-5: Existing and proposed heights of structures within one-half mile of Oakley Hill.**

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/295	126	150	24
557/296	128	151	24
557/297	123	152	29

Despite this increase in height, it is not anticipated that there will be any visibility of the replacement structures from the property. The intervening distance, vegetation, and development will continue to screen all views of the project. This was confirmed with photo simulation revealing all associated structures will remain well beneath the horizon and treeline.

As such, the project will not introduce any change in setting or viewshed of or from Oakley Hill, or publicly accessible vantage points along the perimeter of the property. Therefore, it is D+A's opinion that the Chickahominy-Elmont Project *will not be visible from the property* will therefore result in ***no impact*** to the Oakley Hill per VDHR's impact characterization scale.

Figure 5-22 illustrates the location of Oakley Hill in relation to the project alignment and study buffers, with the location and direction of representative photographs and photo simulations. Representative photographs and simulations are provided in Figure 5-23 through Figure 5-26.



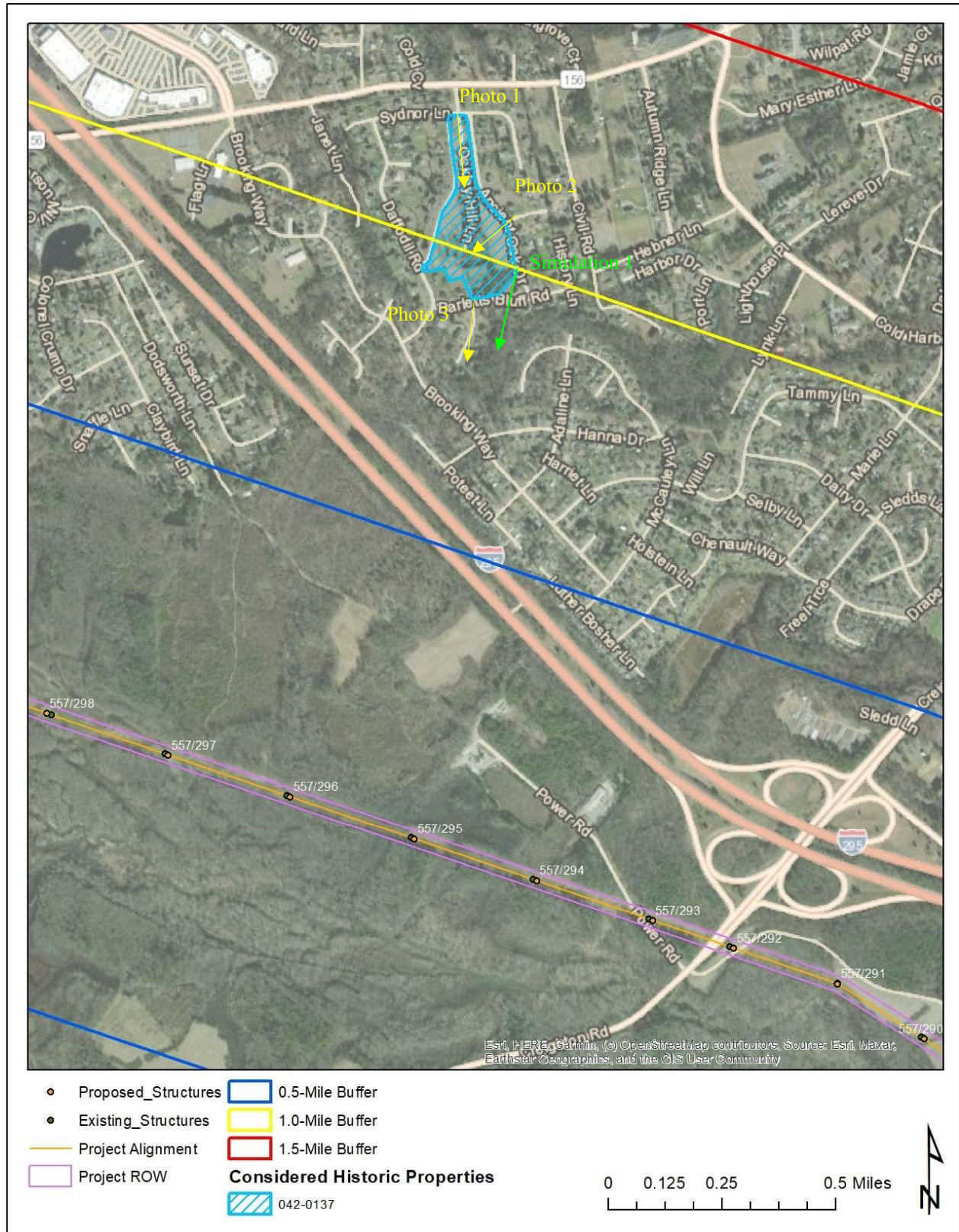
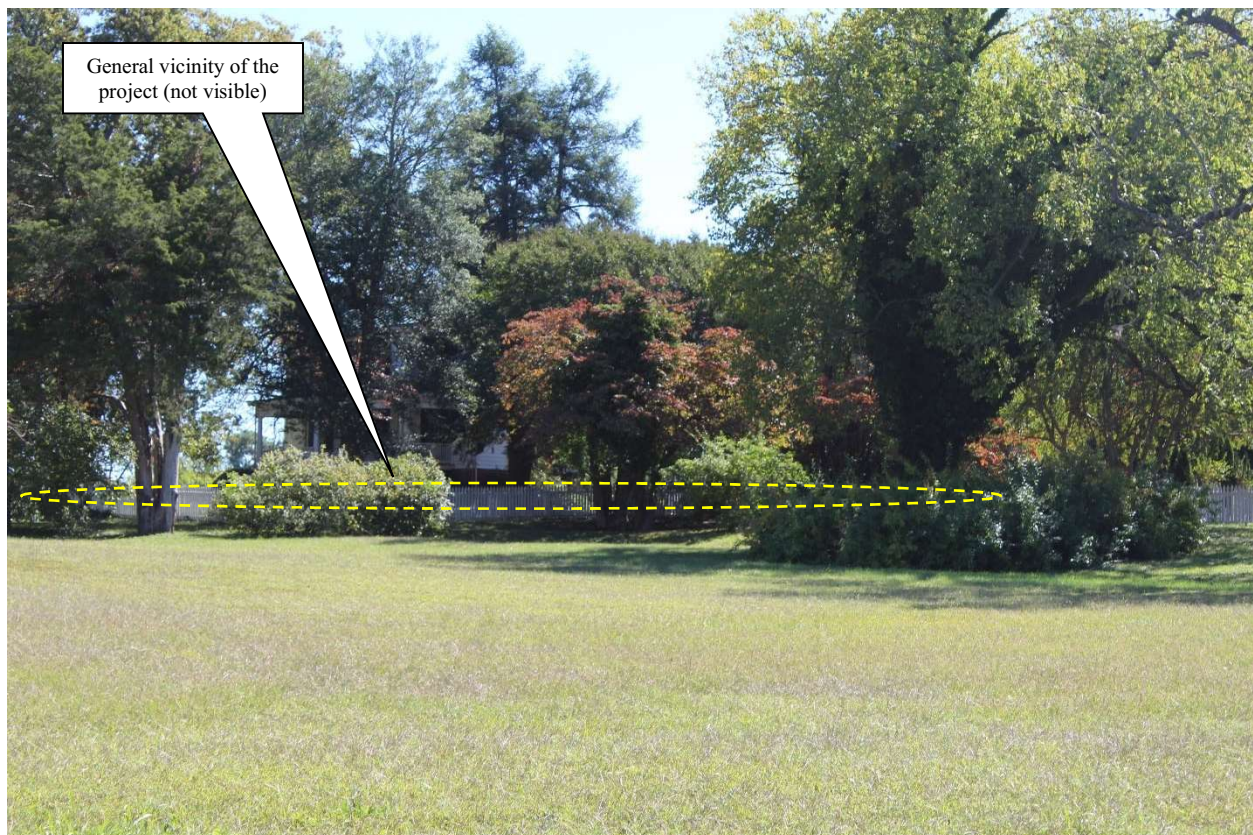


Figure 5-22: Oakley Hill in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulations shown in green.





**Figure 5-23: photo location 1 – View from front of Oakley Hill property, facing south**



**Figure 5-24: photo location 2 – View from Ancient Oak Drive, facing west**





**Figure 5-25: photo location 3 – view from Bartletts Bluff Road, facing south**





**Figure 5-26: Photo Simulation 1 – Existing (above) and proposed (below) view from Oakley Hill property, facing south. All structures shown in yellow to remain screened behind vegetation.**



**VDHR# 042-5017**  
**Second Cold Harbor Battlefield**

The Second Cold Harbor Battlefield encompasses 439 acres in southeastern Hanover County, Virginia approximately nine miles northeast of Richmond and is contained within the Richmond National Battlefield Park Historic District. The battlefield contains monuments, interpretive markers, a cemetery, historic road beds, ruins, and the Garthright House. It also contains remnants of both Federal and Confederate earthworks built during the 1864 Battle of Cold Harbor, and what served as the no-man's land between the two sets now consists of open woods. The landscape is relatively flat and characterized by secondary-growth forest, bisected by Bloody Run Stream and a branch of the Powhite Stream. The area has experienced heavy modern development, including the construction of a major transportation corridor, Route 360, along which residential subdivisions and commercial areas have developed, negatively affecting the historic character and viewsheds of the battlefield.

The 1864 Battle of Cold Harbor, fought between May 31 and June 12, 1864, was part of Grant's Overland Campaign. On May 31, 1864, Sheridan's Federal cavalry seized the crossroad of Old Cold Harbor, a vital access point to Richmond. Over the next twelve days, both sides received reinforcements and fought for control of Cold Harbor. After experiencing heavy losses, General Grant withdrew his forces across the James River, considering the charges he ordered in the battle one of his greatest regrets of the war. Grant abandoned the well-defended approaches to Richmond, instead changing strategy and shifting his armies south of the river to threaten Petersburg. The battlefield is significant for its association with Civil War military history, as well as several principal commanders of the war, including Ulysses S. Grant, Robert E. Lee, and George B. McClellan. Additionally, the site is architecturally significant for the colonial Virginia domestic architecture embodied by the Garthright House, which is contained within the battlefield. It has also illustrated archaeological potential to yield information about the battle and antebellum uses of the land. As such, the battlefield is considered potentially eligible for listing in the NRHP under Criteria A, B, C, and D.

As a **battlefield** located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Second Cold Harbor Battlefield occupies a large landscape spread throughout eastern Hanover County generally to the north and east of the project alignment. Several edges and small portions of the battlefield are located within one mile of the project, and two discrete areas are directly crossed by the project alignment. Most of the battlefield "core area" as delineated by the ABPP is located further than one mile from the project, although a small portion of the battlefield that is crossed by the project is considered core area. Two structures to be replaced as part of the project are located within this portion of core area, which coincides with a tract of land owned by the NPS and preserved as part of the Richmond National Battlefield Park. An additional 13 structures to be replaced are located within the overall "study area" of the battlefield.

The two primary portions of the battlefield located in proximity to the project are the area along Cold Harbor Road where it crosses the Chickahominy River, as well as further southeast where Williamsburg Road crosses the Chickahominy River.

As there are structures to be replaced directly within the limits of the battlefield, there is the potential for direct impacts. The potential will be reduced by all work associated with the project being

limited to the existing cleared ROW, and all structures will generally be replaced on a one-to-one basis in approximately the same location. While there are no known earthworks or other battle-related features in the location of transmission structures, there are recorded archaeological sites located within the ROW.

To assess potential indirect, and specifically visual impacts, a site visit was made to the portions of the battlefield within the vicinity of the project to inspect the existing setting and viewshed with emphasis on views towards the project and associated improvements. Photographs were taken from the publicly-accessible locations towards the project alignment to document current conditions, lines of sight, and the extent of visibility of existing infrastructure. Photo simulations were also prepared from representative vantage points.

Inspection from representative vantage points in the battlefield within one mile of the project revealed that in general, there is limited visibility of the existing transmission line and structures to be replaced. The landscape of the area is rolling and much of it is densely wooded which inhibits wide and unobstructed views. The transmission line corridor also generally extends through the lower elevation areas bordering the Chickahominy River, and therefore it is often at a substantially lower elevation and below the line of sight from many upland areas in the battlefield. There are a handful of discrete vantage points where portions of one or two existing structures are visible above treelines, however, there are no locations, other than where the ROW crosses roads, that multiple structures are visible.

With regards to the portion of battlefield core area crossed by the project, views of the existing transmission line are limited to the length of Cold Harbor Road that is directly crossed by the ROW. From this vantage point, the existing infrastructure is visible up and down the cleared ROW, however, it immediately becomes screened from view beyond the ROW due to the thick vegetation that lines both sides of the road. Although this area is owned and managed by the NPS, there is no pull-off, parking, or other interpretative or publicly-accessible vantages in this area.

Inspection from the other portion of the battlefield crossed by the project revealed similar conditions in which the existing infrastructure is visible only from the immediate vicinity of where the ROW crosses Williamsburg Road, while it becomes screened by vegetation from further distances.

The existing transmission line structures located within the two portions of the battlefield crossed by the project currently range from 108 to 128 feet tall, and will be replaced with structures that will range from 138 to 157 feet tall, resulting in an increase of 19 to 33 feet for individual structures (Table 5-6). The existing steel lattice structures will generally be replaced on a one-to-one basis with steel H-frame structures in roughly the same locations.

**Table 5-6: Existing and proposed heights of structures within the Second Cold Harbor Battlefield.**

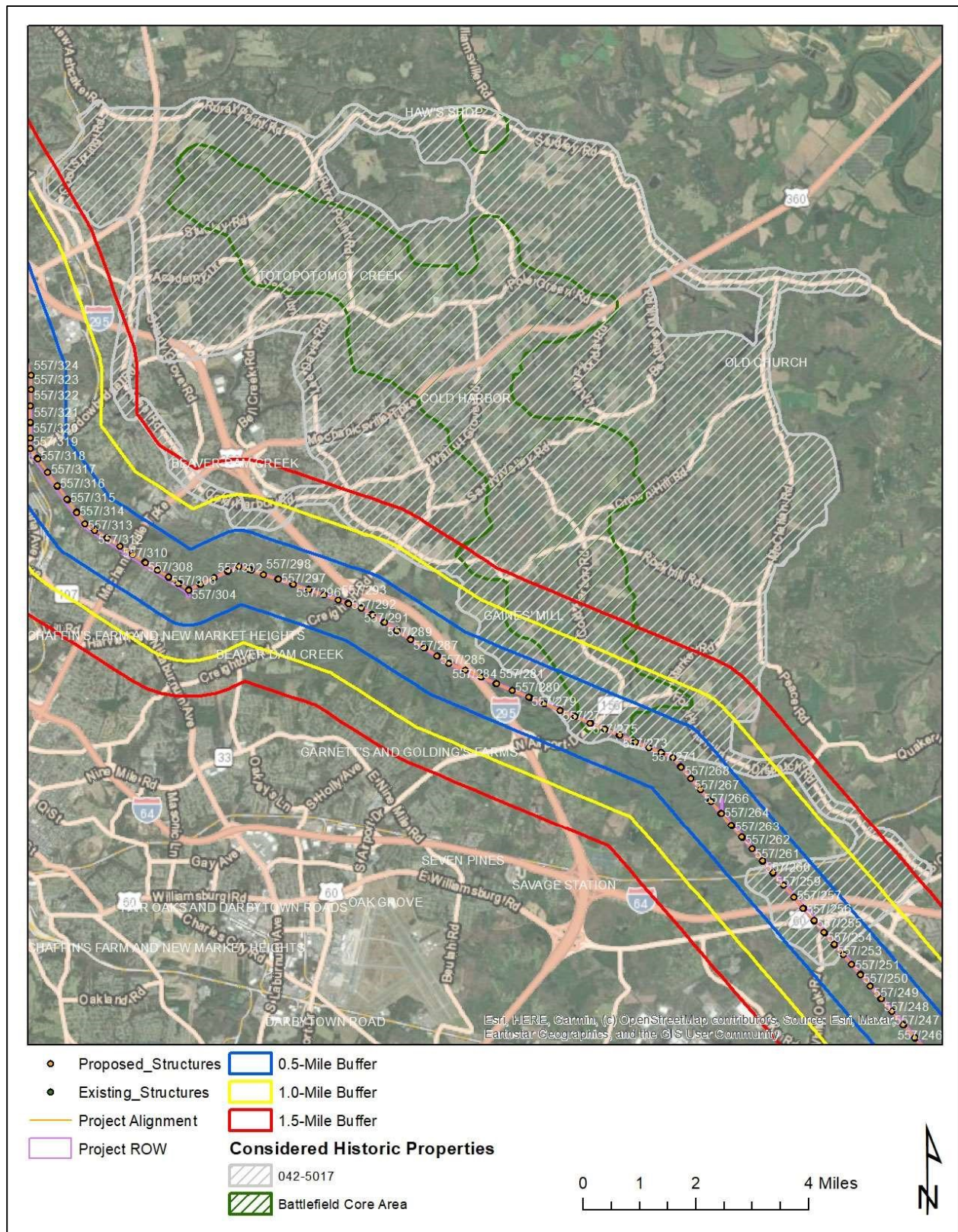
Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
<b>Cold Harbor Road Area</b>			
557/270	108	138	30
557/271	113	137	24
557/272	128	147	19

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/273	125	154	29
557/274	122	147	24
557/275	124	153	29
557/276	124	148	24
557/277	126	155	29
<b>Williamsburg Road Area</b>			
557/253	113	147	33
557/254	123	147	24
557/255	128	152	24
557/256	128	152	25
557/257	128	157	29
557/258	119	143	24
557/259	124	153	29

With the increase in height proposed as part of the project, it is not anticipated that visibility of the project will change dramatically from any vantage points within the battlefield. In most areas, it is not anticipated to rise above the treelines and vegetation that currently screens the existing transmission line, and therefore will not result any additional or new visibility from any vantage points at further distances where the existing line is currently not visible. This was confirmed with photo simulation from representative locations in the battlefield.

As such, the project will introduce a slight change in visibility of the transmission line to be rebuilt from discrete vantage points where the existing transmission line is already visible, however, it will remain screened from most locations. Where visible, the change in height will be offset by the less imposing profile of the H-frame structures compared to the current steel lattice structures. It is therefore D+A's opinion that the project will *occur within viewsheds that have existing transmission lines*, and within *views that have been partially obstructed by intervening topography and vegetation*, and have no more than a **minimal impact** on the Second Cold Harbor Battlefield per VDHR's impact characterization scale.

Figure 5-27 depicts the overall boundary of the Second Cold Harbor Battlefield in relation to the project alignment and viewshed buffers, and Figure 5-28 provides a detail of the portion of the battlefield in proximity to the project, with the location and direction of all representative photographs and photo simulations. Figure 5-29 through Figure 5-41 provide representative photographs from the battlefield towards the project, as well as 3D renderings and photo simulations.



**Figure 5-27: Overall limits of the Second Cold Hard Battlefield with ABPP tiers in relation to the project.**



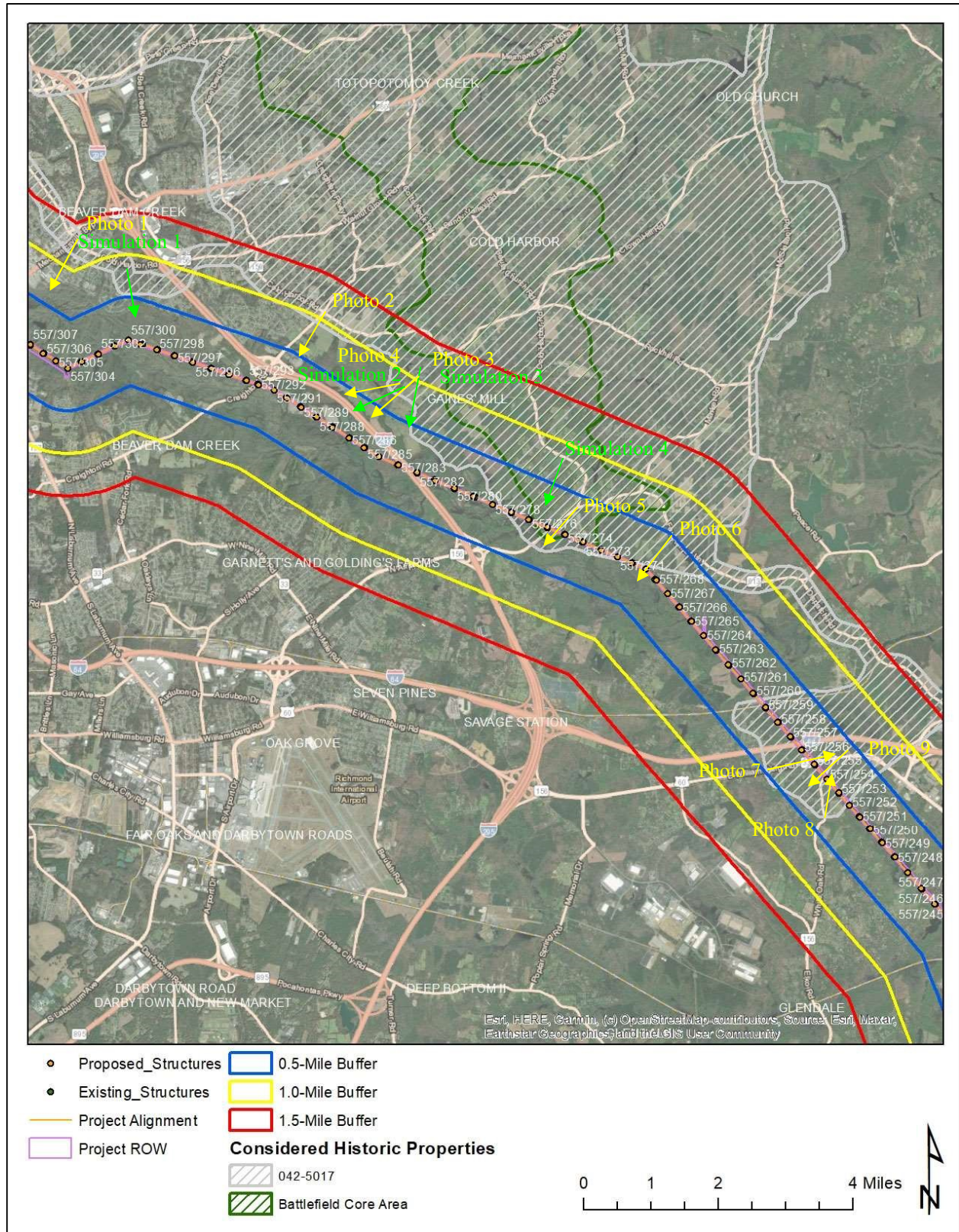


Figure 5-28: Detail of the Second Cold Harbor Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.





**Figure 5-29: Photo location 1- View from Cold Harbor Road at Stonewall Drive, facing south.**



**Figure 5-30: Photo location 2- View from Cold Harbor Road and Lee Davis Road, facing southwest.**