



Figure 5-31: Photo location 3- View from Gaines Mill interpretive site parking lot, facing southwest.



Figure 5-32: Photo location 4- View from hiking trail at Gaines Mill interpretive site, facing southwest.



Figure 5-33: Photo location 5- View from Cold Harbor Road at Market Road, facing southwest.



Figure 5-34: Photo location 6- View from Cold Harbor Road at Market Road, facing southwest.



Figure 5-35: Photo location 7- View from E Williamsburg Road west of Chickahominy River, facing east.



Figure 5-36: Photo location 8- View from White Oak Road south of E Williamsburg Road, facing northeast.



Figure 5-37: Photo location 9- View from White Oak Road south of E Williamsburg Road, facing northeast.



Figure 5-38: Photo Simulation 1 – Existing (above) and proposed (below) view from Beaver Dam Creek Battlefield interpretative area within Second Cold Harbor Battlefield limits, facing south. All structures shown in yellow to remain screened behind vegetation.

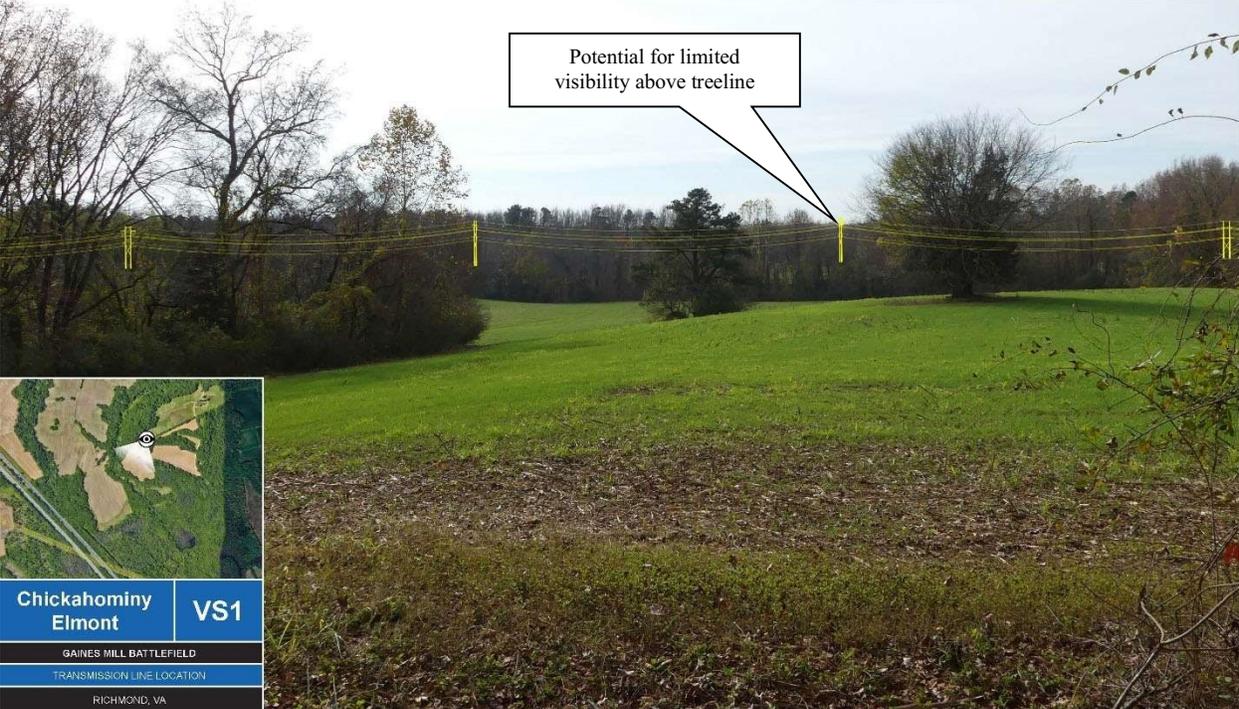


Figure 5-39: Photo Simulation 2 – Existing (above) and proposed (below) view from Gaines Mill Battlefield hiking trail within Second Cold Harbor Battlefield limits, facing southwest. All structures shown in yellow to remain screened behind vegetation. Top of one structure will remain visible above treeline.



Figure 5-40: Photo Simulation 3 – Existing (above) and proposed (below) view from Gaines Mill Battlefield parking area within Second Cold Harbor Battlefield limits, facing south. All structures shown in yellow to remain screened behind vegetation.



Figure 5-41: Photo Simulation 4 – Existing (above) and proposed (below) view from Cold Harbor Road at Turkey Hollow Place within Second Cold Harbor Battlefield, facing south. All structures shown in yellow to remain screened behind vegetation.

VDHR# 042-5018
First Cold Harbor Battlefield / Gaines' Mill Battlefield

The Gaines' Mill Battlefield occupies approximately 346 acres situated atop a plateau above the Chickahominy River corridor in eastern Hanover County five miles southeast of Mechanicsville. The battlefield contains interpretive signs and markers, the Cold Harbor National Cemetery, family cemeteries, major roads that follow historic alignments, historic roadbeds, ruins of the Adams House, period homes including Watt House, Curtis House, Garthright House, and others. Important resources within the battlefield include the Adams property, which has remained in the same family since the Civil War, and portions of the Springfield plantation. The landscape is primarily of agricultural use with low rolling hills surrounded by wooded areas. Powhite Creek comprises a portion of the northwest and west boundaries, and Interstate 295 runs along part of the southwest boundary. Modern development has negatively affected the battlefield's historic character and viewsheds, although the core area of the battlefield remains substantially intact, which portions of it maintained by the National Park Service.

The Battle of Gaines' Mill, also known as the First Battle of Cold Harbor, was fought on June 27, 1862 as part of McClellan's Peninsula Campaign and was the third of the Seven Days' Battles. On June 27, General Lee renewed attacks against Porter's V Corps, which had established a strong defense line behind Boatswain's Swamp north of the Chickahominy River. Porter's forces held their defenses against the Confederate attacks, inflicting heavy casualties, until the Confederates broke the Union line at dusk with a coordinated assault. The Union forces were driven back and retreated across the river overnight. The defeat convinced McClellan to abandon his advance on Richmond, protecting the city from capture during 1862. VDHR recommended the battlefield potentially eligible for listing in the NRHP in 2007 under Criterion A for its association with Civil War military history.

As a *battlefield* located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The First Cold Harbor/Gaines Mill Battlefield occupies a large landscape spread throughout eastern Hanover County generally to the north and east of the project alignment. While much of the southern half of the overall battlefield limits are located within one mile of the project, a smaller portion along the outer edge of the battlefield is crossed by a portion of the project alignment. Most of the battlefield "core area" as delineated by the ABPP is located outside of the project area, 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 15 structures to be replaced are located within the overall "study area" of the battlefield.

The portion of the battlefield crossed by and otherwise in proximity to the project generally includes those areas bordering the north side of the Chickahominy River. The core area is focused along Cold Harbor Road where it crosses the 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 Cold Harbor Road and I-295, 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.

Another area owned by the NPS encompassing the Watt House and Gaines Mill Battlefield interpretative area is located north of the project off Watt House Road. Inspection was conducted from multiple locations in this area where monuments, interpretative markers, parking, hiking trails provide for public access. From the primary parking lot and Watt House site, there is no visibility of the existing transmission line due to the vegetation in the area. A hiking trail leading to the edge of a landform reveals that the top of one structure is visible above the treeline at a distance of just over one-half mile. However, all other structures are screened by vegetation or terrain. Inspection from the Watt House site just to the west revealed similar visibility of this one structure top just above the treeline.

The existing transmission line structures located within the two portions of the battlefield crossed by the project currently range from 118 to 146 feet tall, and will be replaced with structures that will range from 142 to 165 feet tall, resulting in an increase of 14 to 29 feet for individual structures (Table 5-7). 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 5-7: Existing and proposed heights of structures within the First Cold Harbor/Gaines Mill Battlefield.

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
557/278	130	154	24
557/279	132	156	24
557/280	130	154	24
557/281	127	156	29
557/282	146	165	19
557/283	146	165	19
557/284	126	140	14
557/285	109	142	33
557/286	133	152	19
557/287	126	149	23
557/288	122	147	25
557/289	118	147	28

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, including the NPS-owned land. In most areas, it is not anticipated to rise above the treelines and the vegetation that currently screens the existing transmission line will continue to do so. This was confirmed with photo simulation from multiple representative locations in the battlefield, including in the NPS land where it revealed there would be no additional visibility of structures beyond those that are already visible.

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 First Cold Harbor/Gaines Mill Battlefield per VDHR's impact characterization scale.

Figure 5-42 depicts the First Cold Harbor/Gaines Mill Battlefield in relation to the project alignment and viewshed buffers, with the location and direction of all representative photographs and photo simulations. Figure 5-43 provides a detail of the portion of the battlefield owned by the NPS and managed as the Gaines Mill interpretive area. Figure 5-44 through Figure 5-58 provide representative photographs from the battlefield towards the project, as well as photo simulations.

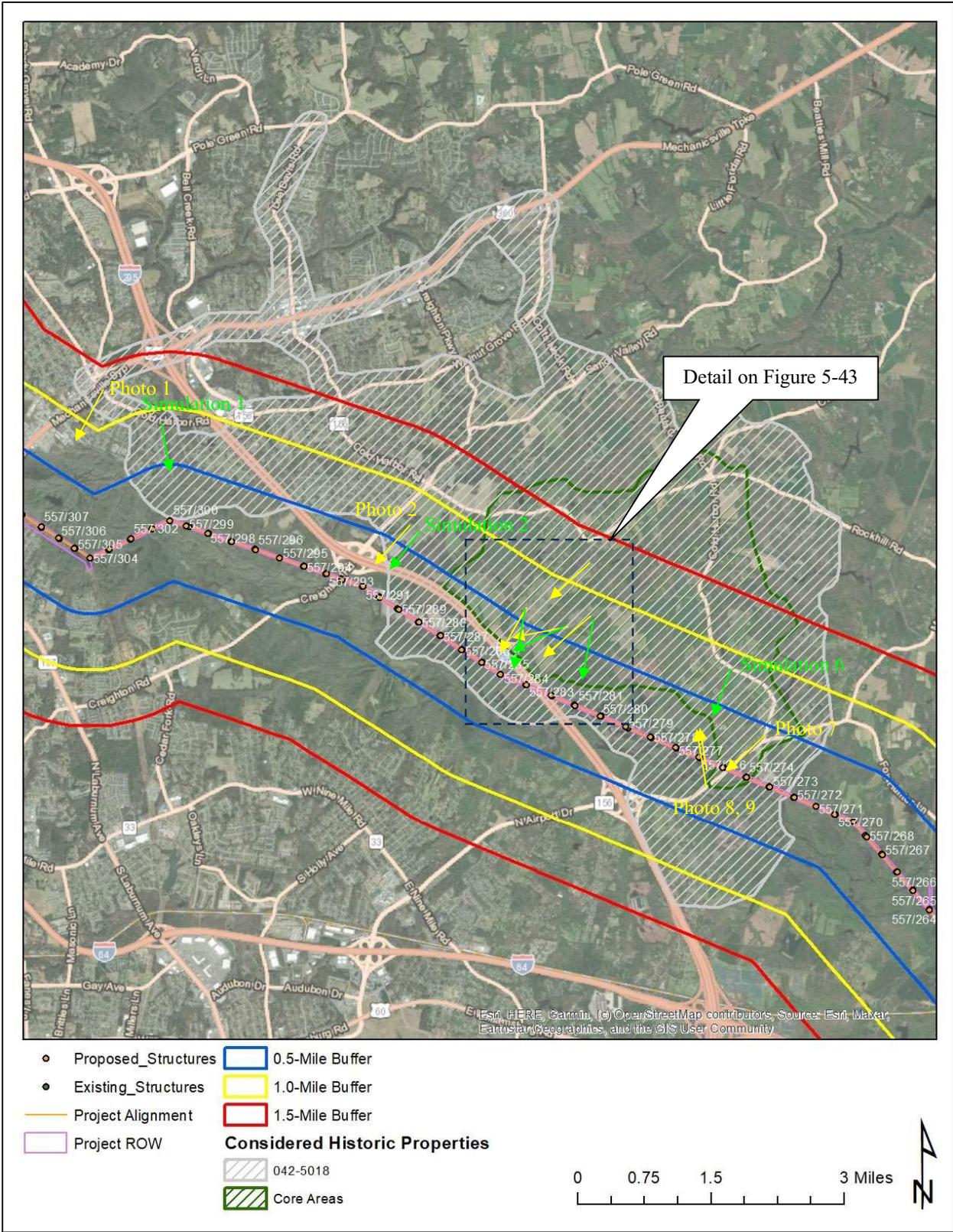


Figure 5-42: First Cold Harbor Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.

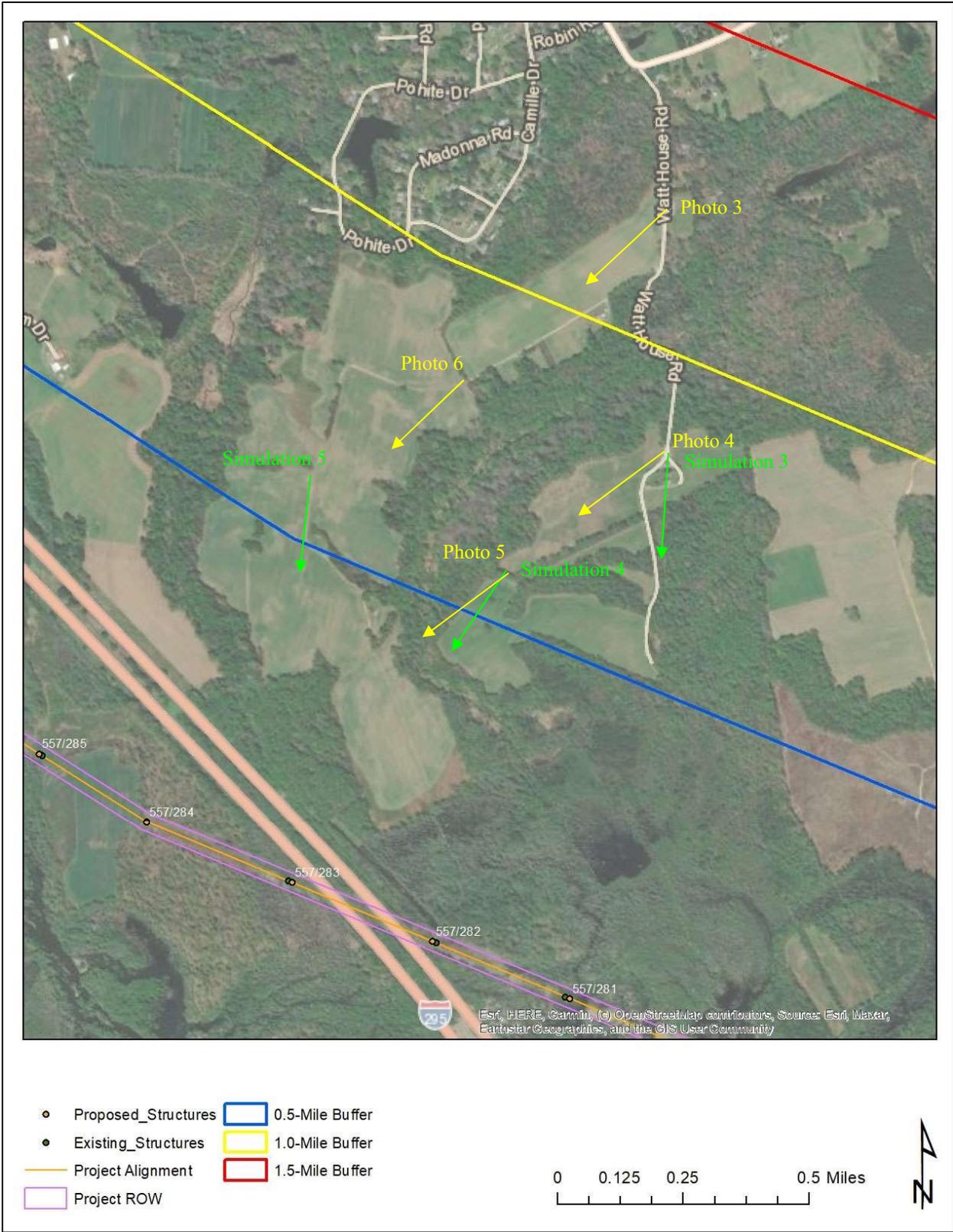


Figure 5-43: Detail of the Gaines Mill Interpretive area of the First Cold Harbor/Gaines Mill Battlefield with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



Figure 5-44: Photo location 1- View from Cold Harbor Road at Stonewall Drive, facing south.

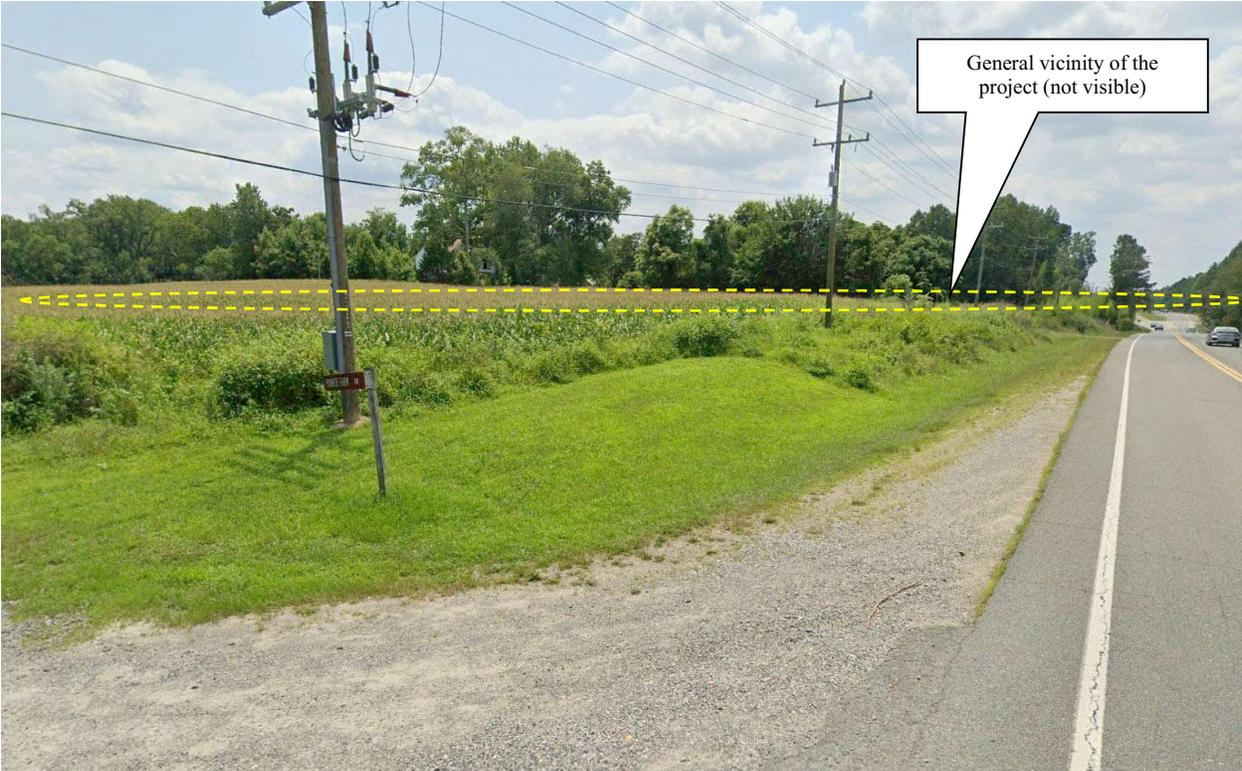


Figure 5-45: Photo location 2- View from Powwhite Farm Road at Creighton Road, facing south.



Figure 5-46: Photo location 3- View from Mississippi Monument parking lot at Gaines Mill, facing southwest.



Figure 5-47: Photo location 4- View from Gaines Mill interpretive site parking lot, facing southwest.



Figure 5-48: Photo location 5- View from hiking trail at Gaines Mill interpretive site, facing southwest.



Figure 5-49: Photo location 6- View from Watt House Road in Gaines Mill Battlefield area, facing southwest.



Figure 5-50: Photo location 7- View from Cold Harbor Road at Market Road, facing southwest.



Figure 5-51: Photo location 8- View from Seven Days Battle wayside, facing northwest.



Figure 5-52: Photo location 9- View from Seven Days Battle walking path, facing northwest.



Figure 5-53: Photo Simulation 1 – Existing (above) and proposed (below) view from Beaver Dam Creek Battlefield interpretative area within First Cold Harbor Battlefield limits, facing south. All structures shown in yellow to remain screened behind vegetation.



Figure 5-54: Photo Simulation 2 – Existing (above) and proposed (below) view from Hogan House property along Powhite Farm Road within First Cold Harbor Battlefield limits, facing south. All structures shown in yellow to remain screened behind vegetation.



Figure 5-55: Photo Simulation 3 – Existing (above) and proposed (below) view from Gaines Mill Battlefield parking area, facing south. All structures shown in yellow to remain screened behind vegetation.

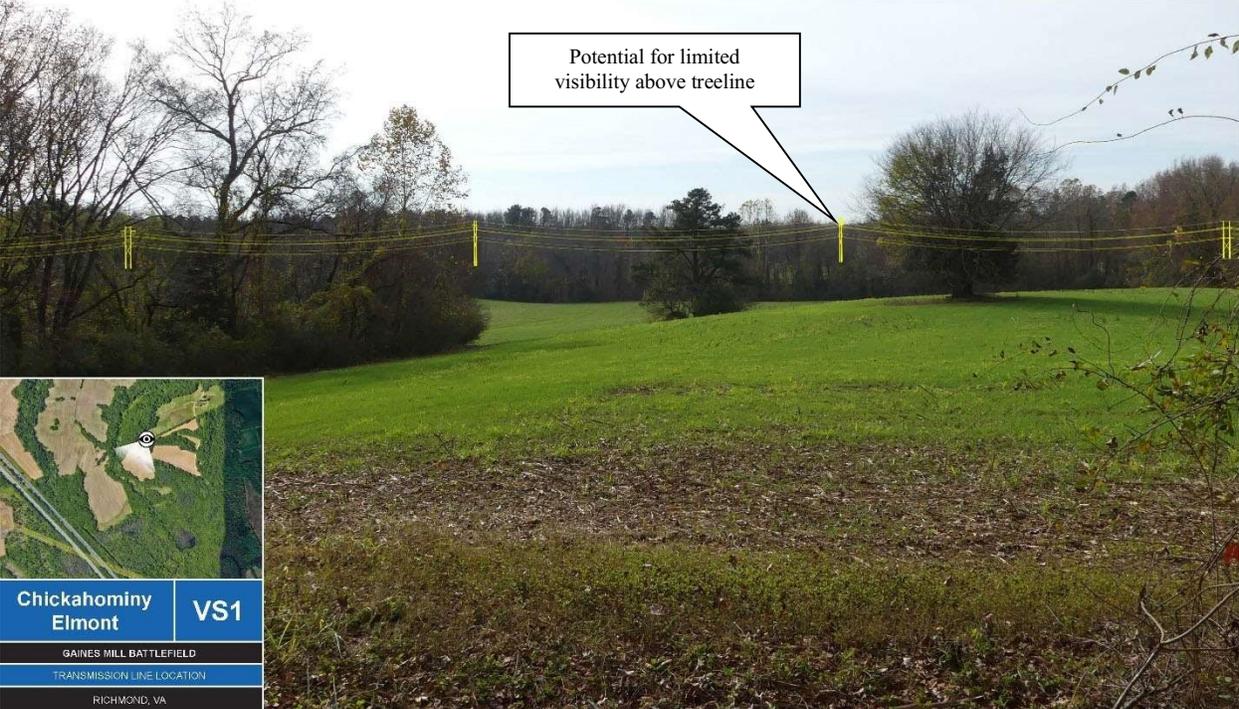


Figure 5-56: Photo Simulation 4 – Existing (above) and proposed (below) view from Gaines Mill Battlefield hiking trail, facing southwest. All structures shown in yellow to remain screened behind vegetation. Top of one structure will remain visible above treeline.



Figure 5-57: Photo Simulation 4 – Existing (above) and proposed (below) view from agricultural field within closed portion of Gaines Mill Battlefield tract, facing south. All structures shown in yellow to remain screened behind vegetation. Top of one structure will remain visible above treeline.



Figure 5-58: Photo Simulation 6 – Existing (above) and proposed (below) view from Cold Harbor Road at Turkey Hollow Place, facing south. All structures shown in yellow to remain screened behind vegetation.

VDHR# 042-5022
Totopotomoy Creek Battlefield

The Totopotomoy Creek Battlefield is located in Hanover and King William Counties in Virginia, occupying roughly 124 acres. It is bound to the north by Studley Road, to the west and south by Totopotomoy Creek, and to the east by a residential subdivision. The battlefield contains the remains of trenches dug on the banks of the Totopotomoy Creek during the battle, pedestrian paths, and the Shelton House along with the remains of its gardens and a small family cemetery associated with the property. The landscape reflects agricultural and residential use, characterized by a mix of wooded areas, agricultural fields, and residential subdivisions. Much of the historic character and viewsheds of the battlefield have been compromised by modern housing development, although some areas of the battlefield continue to convey their historic character.

The Battle of Totopotomoy Creek was fought from May 28-30, 1864 as part of Grant's Overland Campaign. On May 27, Lt. Gen. Grant's army began crossing the Pamunkey River moving southeast. In response, Gen. Lee deployed the Army of Northern Virginia to meet them. Starting on May 28, fighting took place along Totopotomoy Creek and near Bethesda Church and Shady Grove Church Road, resulting in heavy casualties on both sides. The bloody battle was typical of the Overland Campaign, which was characterized by chronic combat fatigue, loss of command control, and heavy losses. The battlefield is considered potentially eligible for listing in the NRHP under Criterion A for its association with Civil War history.

As a ***battlefield*** located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Totopotomoy Creek Battlefield occupies a large landscape spread throughout eastern Hanover County generally to the north and east of the project alignment. Only a small, discrete portion of the edge of the battlefield is located within one mile of the project while the rest of the battlefield is well over one and a half miles away. The nearest portion of battlefield "core area" as delineated by the ABPP is over two miles away. As such, there will be no direct impact to the battlefield as part of the project.

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.

Inspection of the portion of the battlefield located within one mile of the project found is currently developed with a large, industrial complex. From this area, the project is located across Interstate 295, and beyond additional commercial, industrial, and residential development. The existing transmission line is not visible due to the intervening distance, vegetation, and development.

The nearest existing transmission line structures to the battlefield currently range from 106 to 134 feet tall, and will be replaced with structures that will range from 120 to 157 feet tall, resulting in an increase of 14 to 35 feet for individual structures (Table 5-8). 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 5-8: Existing and proposed heights of structures within one mile of the Totopotomoy Creek Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/327	134	157	23
557/328	123	157	33
557/329	115	144	29
557/330	109	143	34
557/331	106	120	14
557/332	106	140	35
557/333	110	140	29

Even with the increase in height proposed as part of the project, it is not anticipated that there will be any visibility of the replacement structures from the battlefield. The intervening distance, topography, vegetation, and development patterns will continue to screen all views of the transmission line from all vantage points within the battlefield.

As such, the project will not introduce any change in the setting or viewshed of or from the battlefield. Therefore, it is D+A’s opinion that the Chickahominy-Elmont Project *will not be visible from the property* and will have ***no impact*** on the Totopotomoy Creek Battlefield per VDHR’s impact characterization scale.

Figure 5-59 depicts the overall limits of the Totopotomoy Creek Battlefield in relation to the project alignment and viewshed buffers. Figure 5-60 provides a detail of the portion of the battlefield located within one mile of the project, with the location and direction of all representative photographs. Figure 5-61 and Figure 5-62 provide representative photographs from the battlefield towards the project.

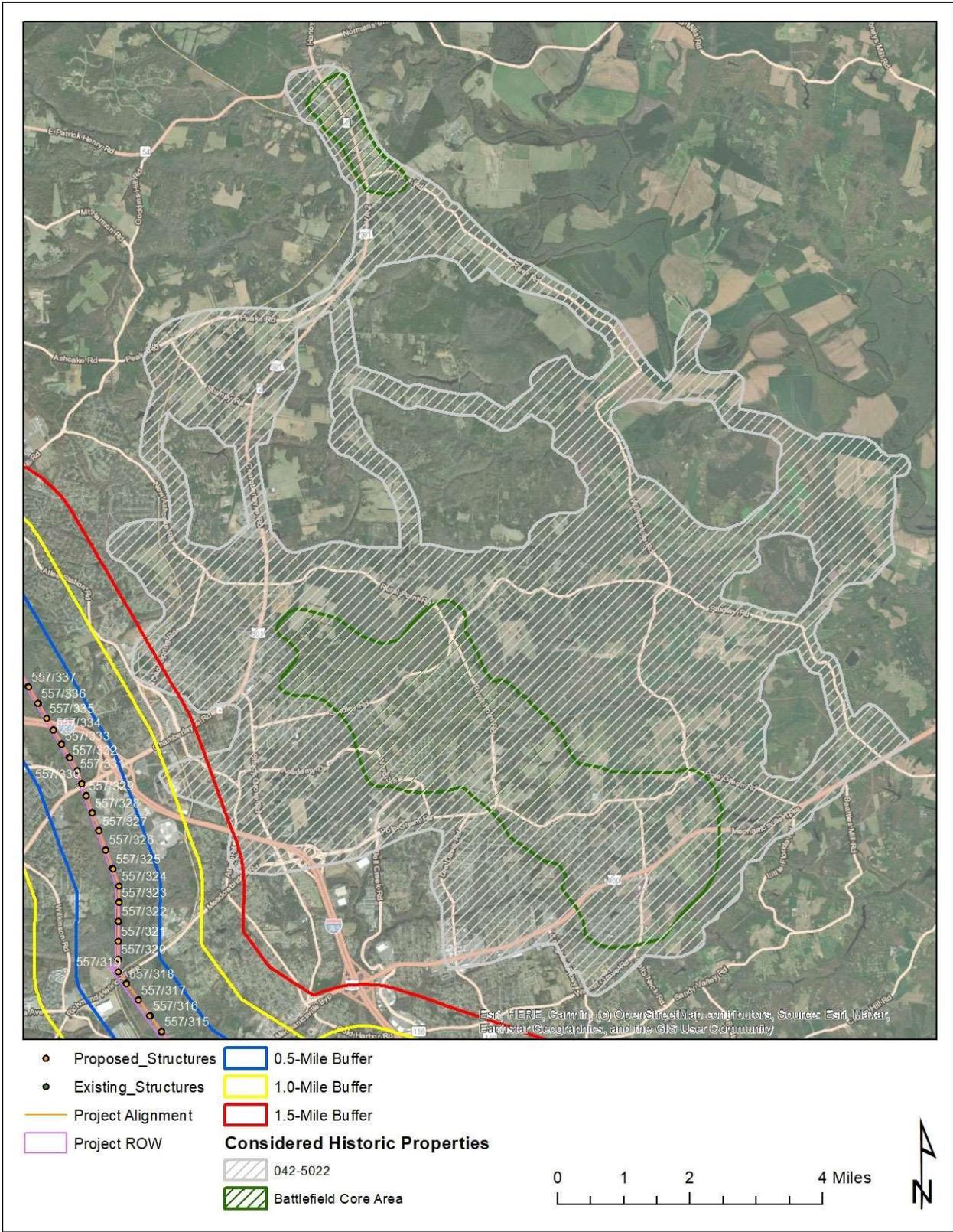


Figure 5-59: Overall limits of the Totopotomoy Creek Battlefield with ABPP tiers in relation to the project.

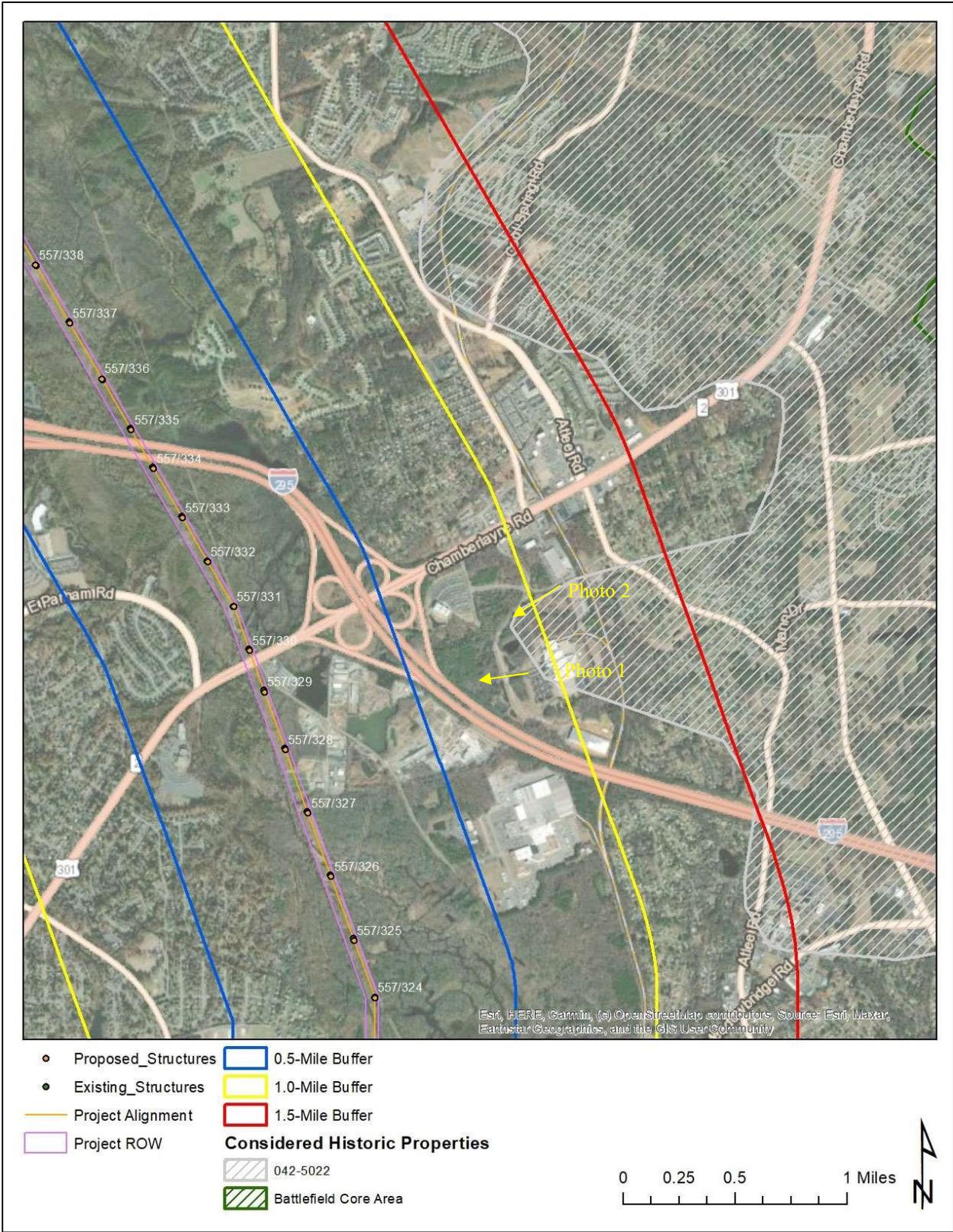


Figure 5-60: Totopotomoy Creek Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow.



Figure 5-61: Photo location 1- View from Times Dispatch Boulevard, facing west.



Figure 5-62: Photo location 2- View from Studley Road, facing southwest.

VDHR# 042-5479
Beaverdam Creek Battlefield

The Beaverdam Creek Battlefield is located in Hanover County and Henrico County, Virginia, encompassing approximately 14,152 acres in total. The area subject to survey is located south of Cold Harbord Road in the vicinity of Ellerson Mill and is roughly 16 acres. This area is covered by dense swaths of woods and a small clearing west of Beaverdam Creek, which slopes down to the water. The surrounding landscape is comprised of residential development, characterized by subdivisions of single-family homes. Much of the historic character and viewsheds of the battlefield have been compromised by modern housing development, with only the small area along Beaverdam Creek retaining its historic character.

Beaverdam Creek was one of the first major engagements as part of the Seven Days Battles during the Peninsula Campaign during the Civil War and was part of General Robert E. Lee's defense of Richmond. The resulting fighting ended in Union victory. The battlefield has been subject to survey and evaluation multiple times, resulting in the Beaverdam Creek Battlefield being found not eligible for listing on the NRHP, as the battlefield has been densely developed and does not retain many areas representative of how the area would have looked during the 1862 fighting.

As a *battlefield* located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Beaverdam Creek Battlefield occupies a large landscape spread throughout eastern Hanover County generally to the north and east of the project alignment, although several discrete areas and portions of the battlefield are directly crossed by the project. This includes a very small portion of the battlefield "core area" as delineated by the ABPP, although the majority of the core area is set at a further distance. Just two structures to be replaced as part of the project area located within the core area, and an additional 24 are located within other portions of the battlefield. As determined by the NPS and VDHR, none of the battlefield is considered eligible for listing in the NRHP due to severe loss of integrity from development.

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 Meadowbridge Road, Mechanicsville Turnpike, and Creighton Road, that multiple structures are visible.

With regards to the portion of battlefield core area crossed by the project, this length of the alignment is not visible from any publicly accessible location. This portion of the battlefield is within the low-lying swampy area bordering Chickahominy River and the nearest public access is a road within a residential neighborhood at the confluence with Beaver Dam Creek, roughly 0.36 mile away. Further up Beaver Dam Creek is an NPS interpretative wayside for the Beaver Dam Creek Battlefield and inspection from this area also revealed no visibility of the existing transmission line or structures due to screening provided by the intervening woodland.

The existing transmission line structures located within the portions of the battlefield crossed by the project currently range from 97 to 135 feet tall, and will be replaced with structures that will range from 127 to 157 feet tall, resulting in an increase of 19 to 34 feet for individual structures (Table 5-9). 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, although several 3-pole structures will be used at angles and bends in the alignment.

Table 5-9: Existing and proposed heights of structures within the Beaver Dam Creek Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
Meadowbridge Road Area			
557/317	134	157	23
557/318	135	155	20
557/319	103	127	24
Mechanicsville Turnpike Area			
557/306	97	132	34
557/307	118	137	19
557/308	117	142	25
557/309	122	146	24
557/310	122	146	24
557/311	123	146	24
Creighton Road Area			
557/285	109	142	33
557/286	133	152	19
557/287	126	149	23
557/288	122	147	25
557/289	118	147	28
557/290	108	137	29
557/291	105	129	24
557/292	102	127	25

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/293	102	127	24
557/294	120	149	29
557/295	126	150	24
557/296	128	151	24
557/297	123	152	29
557/298	114	148	34
557/299	110	134	23
557/300	99	119	20
557/301	106	141	34

With the increase in height proposed as part of the project, it is anticipated that there will be a slight change in visibility for a limited number of structures that are already currently visible from vantage points within the battlefield, however, it is not anticipated to result in any new or increased visibility from vantage points where the existing line is not currently visible. Because the project alignment generally follows the low-lying areas bordering the Chickahominy River, it is not anticipated to rise above the treelines from the more elevated areas of the battlefield, and the vegetation that currently screens the existing transmission line will continue to do so. This was confirmed with photo simulation from multiple representative locations in the battlefield, including two NPS interpretative wayside areas where the project will remain completely screened from view.

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 important to note that the Beaver Dam Creek Battlefield has been determined *not eligible* for listing in the NRHP by the NPS and VDHR due to its heavily fractured landscape and extremely compromised current setting. 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 Beaver Dam Creek Battlefield per VDHR's impact characterization scale.

Figure 5-63 depicts the Beaver Dam Creek Battlefield in relation to the project alignment and viewshed buffers with the location and direction of all representative photographs and photo simulations. Figure 5-64 through Figure 5-73 provide representative photographs from the battlefield towards the project, as well as photo simulations.

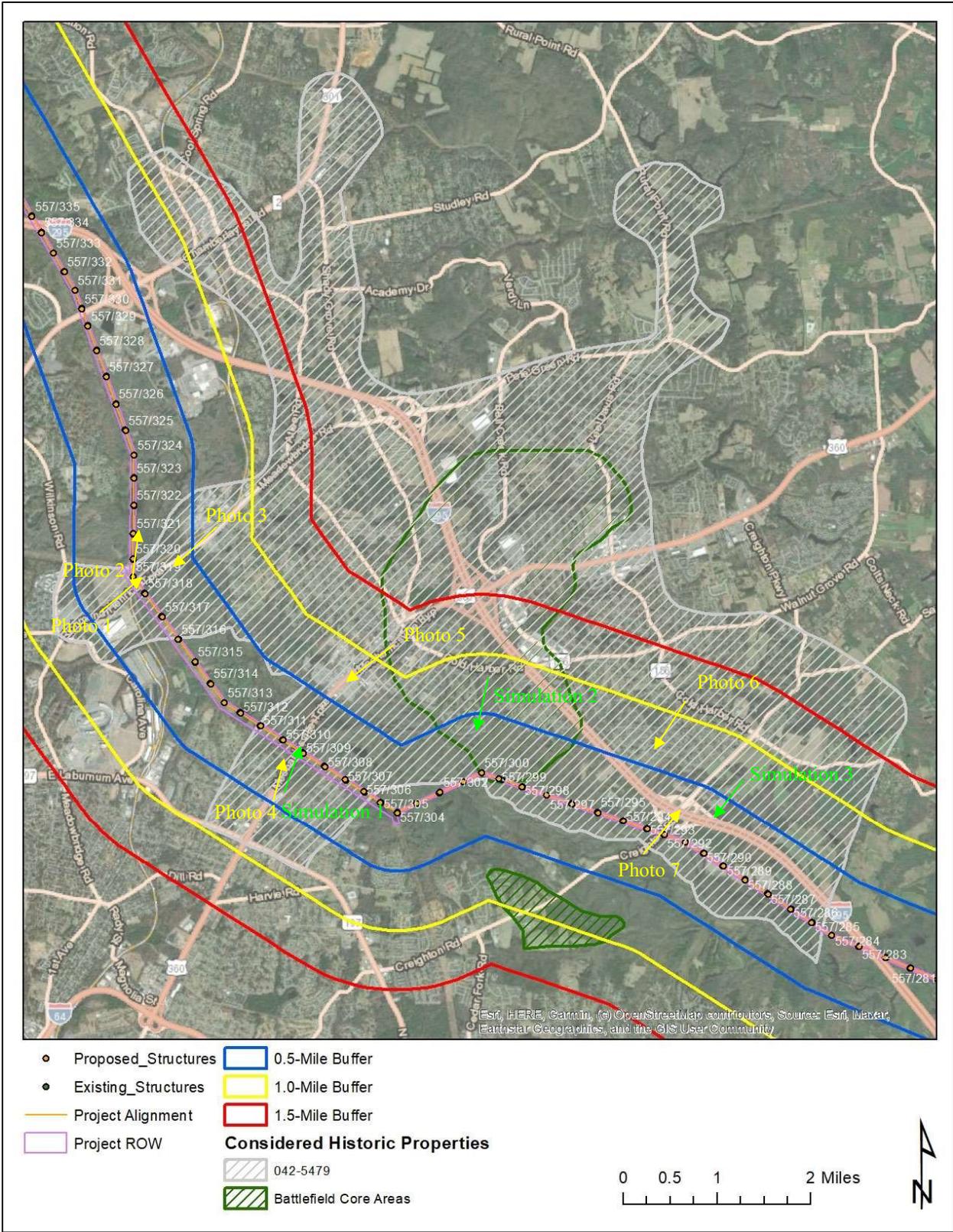


Figure 5-63: Beaver Dam Creek Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.

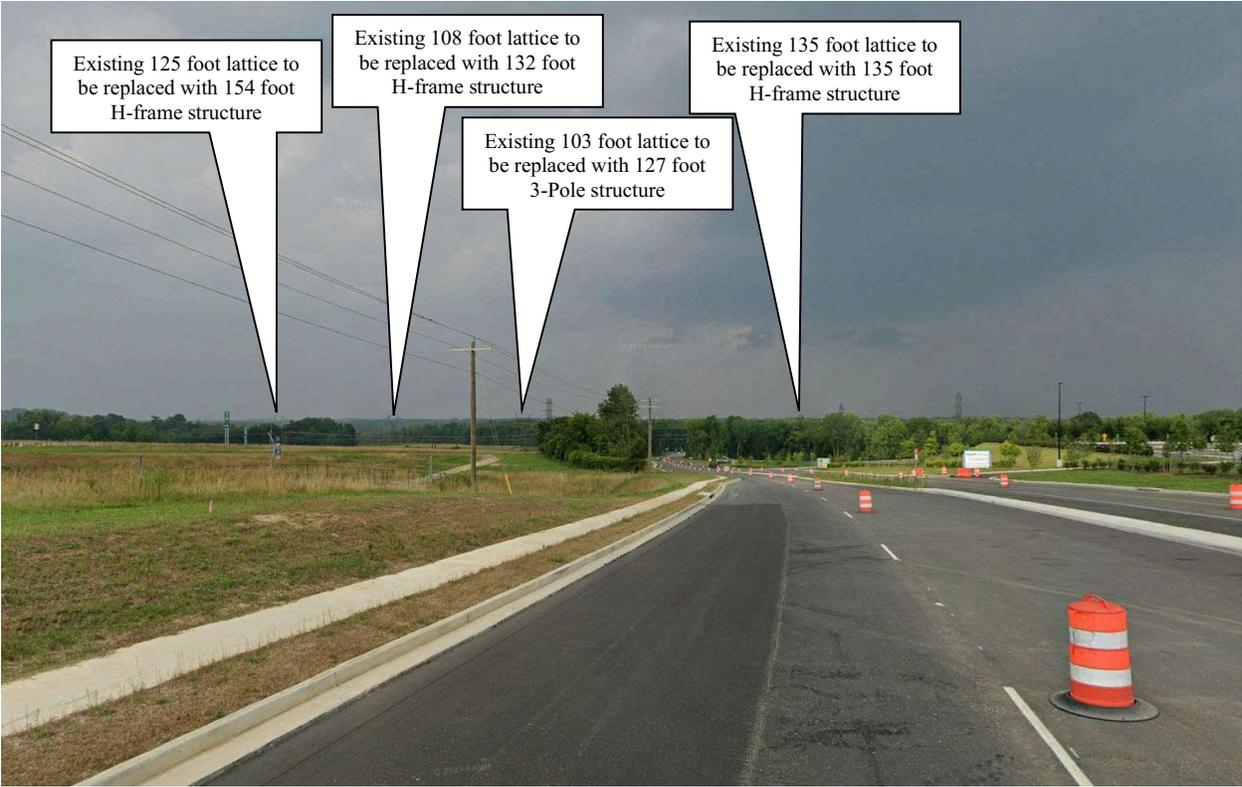


Figure 5-64: Photo location 1- View from Meadowbridge Road near Richmond Raceway, facing northeast.



Figure 5-65: Photo location 2- View from Meadowbridge Road at ROW crossing, facing north.



Figure 5-66: Photo location 3- View from Meadowbridge Road at Industrial Park Road, facing southwest.



Figure 5-67: Photo location 4- View from Chickahominy Bluff interpretive site parking lot, facing northeast.



Figure 5-68: Photo location 5- View from Mechanicsville Turnpike at Cold Harbor Road, facing southwest.



Figure 5-69: Photo location 6- View from Cold Harbor Road, facing south.



Figure 5-70: Photo location 7- View from Creighton Road at Chickahominy River, facing northeast.



Figure 5-71: Photo Simulation 1 – Existing (above) and proposed (below) view from Chickahominy Bluff interpretative area within Beaver Dam Creek Battlefield limits, facing north. All structures shown in yellow to remain screened behind vegetation.



Figure 5-72: Photo Simulation 2 – Existing (above) and proposed (below) view from Beaver Dam Creek Battlefield interpretative area within Beaver Dam Creek Battlefield limits, facing south. All structures shown in yellow to remain screened behind vegetation.



Figure 5-73: Photo Simulation 3 – Existing (above) and proposed (below) view from Hogan House property along Powhite Farm Road within Beaver Dam Creek Battlefield limits, facing south. All structures shown in yellow to remain screened behind vegetation.

VDHR# 042-5509
Ashland UDC Jefferson Davis Highway Marker

Erected in 1927 by the United Daughters of the confederacy, the Ashland UDC Jefferson Davis Highway Marker is located on the west side of U.S. Route 1 at the intersection with Cedar Lane (State Route 623) in Glen Allen, Virginia. The intersection is surrounded by businesses and other commercial establishments. The gray granite ashlar pedestal is 33” tall, 25” wide, 16” thick, and rests on a 10” granite base. The sloping top features a bronze plaque reading: “Jefferson Davis Highway Virginia,” and another bronze plaque on its flat (east) face reads: “Erected by Lee Chapter United Daughters of the Confederacy in honor of their heroic ancestors September 1927.” It is one of sixteen markers erected in Virginia along U.S. Route 1 between 1927 and 1946 as part of a memorial project of the United Daughters of the Confederacy.

The marker is primarily a commemorative resource, but it is also significant as a representation of the period of “named highways” in the in the U.S. starting in 1913. Additionally, it represents a significant achievement for women’s organizations. As such, it was listed in the NRHP in 2013 under Criterion A and in consideration of Criterion F, with a period of significance on 1927, the year it was erected.

As an *NRHP-listed* resource located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The project area generally extends through the landscape to the south of the Ashland UDC Jefferson Davis Highway Marker, roughly 0.59 mile away 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 publicly-accessible locations along the road in front of the property 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 Springdale Road to model the proposed appearance of the replacement structures in relation to existing structures.

The Ashland UDC Jefferson Davis Highway Marker is located on a small grassy plot at the northwestern corner of the intersection of Jefferson Davis Highway (US-1) and Cedar Lane. There is no formal pull-off or parking, but there is a paved parking lot associated with an adjacent property accessed off Cedar Lane. The surrounding area is developed with a variety of twentieth century commercial and residential properties, including a gas station directly across the street. The landscape between the marker and the project is similarly developed with additional treelines and vegetation.

Inspection from US-1 next to the marker revealed that the structures on the existing transmission line to be rebuilt as part of this project are not visible due to the intervening vegetation and development. While the associated conductor is suspended across the road and would be visible down the road corridor, the distance of view and other utilities in the area inhibit it from being seen. The line is flanked by another transmission line within the shared ROW that is taller, and it is also not visible.

The existing transmission line structures located within one mile of the property currently range from 92 to 132 feet tall, and will be replaced with structures that will range from 122 to 164 feet tall, resulting in an increase of 24 to 47 feet for individual structures (Table 5-10). 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, and remain shorter than the structures on the adjacent line in the shared ROW.

Table 5-10: Existing and proposed heights of structures within one- mile of the Ashland UDC Jefferson Davis Highway Marker.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/346	114	143	29
557/347	110	144	34
557/348	92	122	30
557/349	112	142	29
557/350	108	133	25
557/351	103	132	29
557/352	123	152	29
557/353	117	142	24
557/354	132	162	29
557/355	117	164	47

Despite this increase in height, it is not anticipated that there will be any visibility of the replacement structures from the property. The distance, angle of view, and intervening development and vegetation will continue to screen all structures. This was confirmed with 3D model rendering from the property that revealed all associated structures will remain beneath the treeline although there continues to be the potential for a short length of conductor to be visible as it is suspended across the road as the current transmission line does.

As such, the project will not introduce any noticeable change in setting or viewshed of or from the property which is situated in a setting characterized by extensive other development and infrastructure. The new structures will remain shorter than other existing transmission structures in the shared ROW, and beneath the treeline in the distance and not visible from the marker. 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 Ashland UDC Jefferson Davis Highway Marker per VDHR’s impact characterization scale.

Figure 5-74 illustrates the location of the Ashland UDC Jefferson Davis Highway Marker 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 5-75 through Figure 5-77.

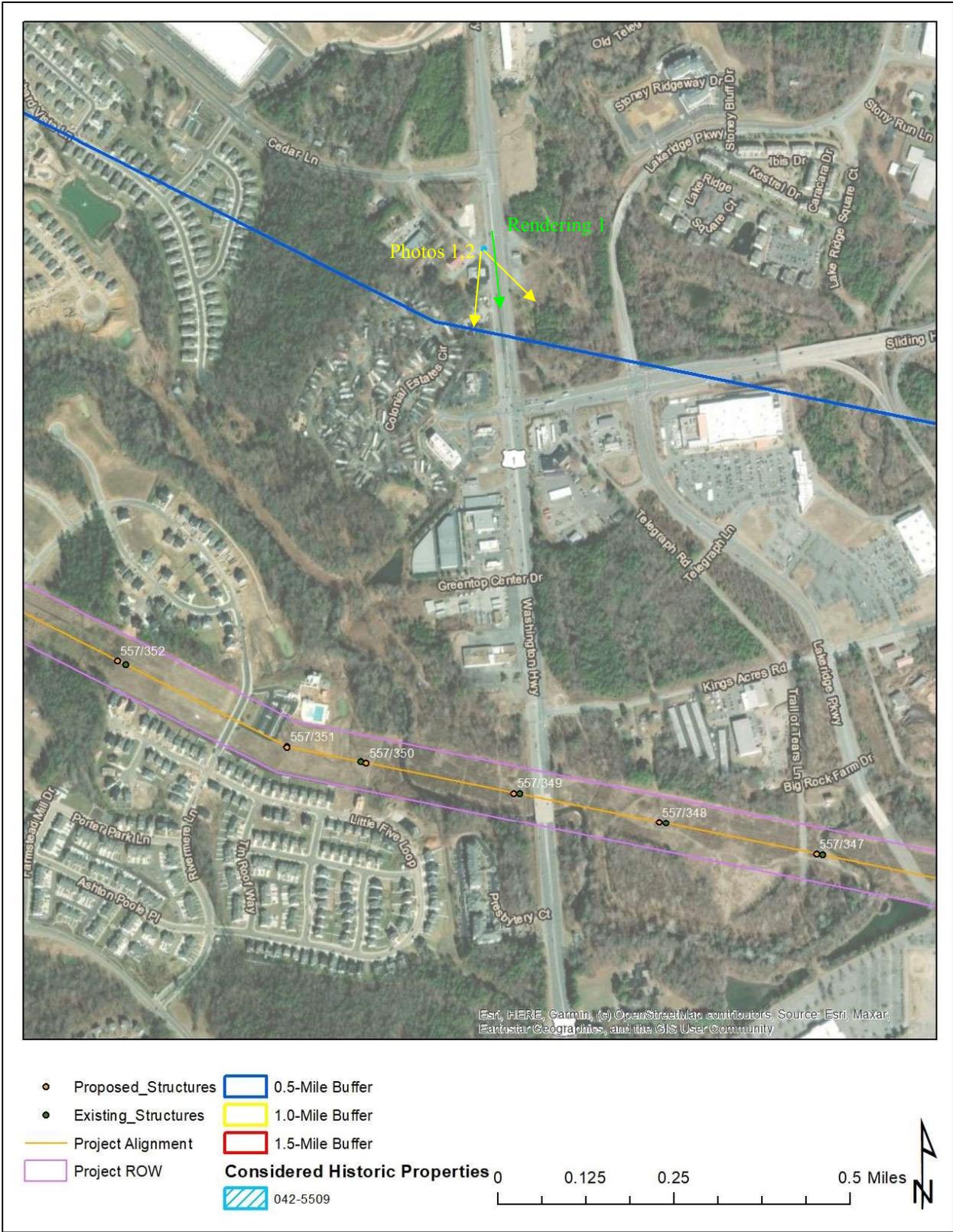


Figure 5-74: Ashland UDC Marker in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



Figure 5-75: Photo location 1- View from Cedar Lane at US-1, facing south.



Figure 5-76: Photo location 2- View from Cedar Lane at US-1, facing southeast.



Figure 5-77: Rendering 1 - model of proposed structures and transmission line from US-1 at UDC Marker (all project structures screened behind vegetation; short length of conductor may be visible across road). Source: Google Streetview

VDHR# 043-0033
Richmond National Battlefield Park

Initially conceived as a state park, Richmond National Battlefield Park was established in 1936 by an act of Congress, accepted by the Department of the Interior in 1944, and listed in the NRHP in 1966. The district encompasses a collection of discontinuous sites related to major events of the Civil War and a total of approximately 2,789 acres located in and around the eastern side of Richmond and parts of Hanover, Henrico, and Chesterfield counties. It is associated with the various Union attempts to take the Confederate capital city of Richmond during the Peninsula Campaign in 1862, the Overland and Bermuda Hundred Campaigns in 1864, and the Richmond-Petersburg Campaign in 1864-1865. The areas around Richmond, including those within the district, were primary farmland at the start of the Civil War. Today most of the area is heavily developed with suburban housing, light industrial sites, and major transportation corridors, including US Interstates 95 and 295. Many earthworks related to Civil War events and remnants of the permanent fortifications defending Richmond from Union attack remain intact and unaltered, although deteriorated. Historically open views and vistas across battle lines, however, have been largely obscured by successional tree growth and encroaching development. Other significant contributing resources include the Watt House, Garthright House, and Shelton House, which were used as military headquarters and/or field hospitals during the Civil War, as well as a series of commemorative markers known as Freeman markers placed around Richmond circa 1925.

Richmond was a social, industrial, and medical center of the South at the start of the Civil War, and was the objective of seven major campaigns as the capital of the Confederacy. It is eligible for listing in the NRHP at the national level under Criteria A, B, C, and D. It is primary significant under Criterion A as the site of major Civil War battlefields, namely Union attempts to take Richmond during the Peninsula Campaign of 1862, the Overland Campaign of 1864, and the Richmond-Petersburg Campaign of 1864-1865. It is also significant under Criterion A for its association with the role played by United States Colored Troops in the September 1864 Battle of Chaffin's Farm/New Market Heights, in addition to early twentieth century efforts to preserve the Richmond battlefields. It is significant under Criterion B for its associations with Union Major General George B. McClellan and Lieutenant General Ulysses S. Grant and Confederate General Robert E. Lee. The Garthright House, Watt House, and Shelton House, all located within the district, are significant under Criterion C at the state level for the representative eighteenth and nineteenth century architecture. It is also significant for its demonstrated and potential ability to provide information about the military and medial experiences of the Union and Confederate armies during the Civil War, as well as the agrarian economy and landscape in antebellum Piedmont Virginia and the enslaved and free black people who lived on it. Additionally, it has the potential to yield information about the American Indian occupation of the Piedmont Plateau from the Early Archaic through Late Woodland periods. In consideration of this, it was listed in the NRHP in 1966.

As an *NRHP-listed* resource located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Richmond National Battlefield Park is comprised of multiple, discontinuous properties and tracts of land scattered around the city of Richmond, and four (4) of these are located within one-mile of the project alignment. Three of these tracts are directly crossed by the project and the fourth immediately abuts the project ROW. As such, there is the potential for both direct and indirect impacts to park lands to result from the project. With regards to 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. No inspection or assessment of archaeological sites occurred as part of this effort.

To assess potential indirect, and specifically visual impacts, a site visit was made to each of the park tracts located within one mile of the project to inspect the existing setting and viewshed with emphasis on views towards the project and associated improvements. Photographs were taken from representative 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. The vantage points selected for photo simulations were selected in coordination with NPS staff from the Richmond National Battlefield Park Unit.

The results of the assessment for each of the land tracts are provided below.

Chickahominy Bluff Interpretative Area

The Chickahominy Bluff area is located on the east side of Mechanicsville Turnpike and abuts the south edge of the project ROW. This tract is mostly wooded but bordered by modern residential development to both sides. A driveway extends from Mechanicsville Turnpike and leads to a circular parking lot and a short walking path that leads to an interpretative sign at the edge of a bluff overlooking the Chickahominy River. The project extends along the rear (downhill) edge of the tract. As such, the two structures to be replaced as part of the project nearest to the interpretative sign are roughly 0.26 and 0.34 mile away. Inspection from locations throughout the accessible portions of the tract, including at the entrance, along the driveway, from the parking lot, and at the interpretative sign revealed no visibility of the existing transmission line due to the thick wooded area occupying the downhill portions of the tract.

The existing transmission line structures located within the viewshed of the tract (one-half mile) currently range from 97 to 123 feet tall, and will be replaced with structures that will range from 132 to 146 feet tall, resulting in an increase of 19 to 34 feet for individual structures (Table 5-11). 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 5-11: Existing and proposed heights of structures within one-half mile of the RNBP Chickahominy Bluff tract.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/306	97	132	34
557/307	118	137	19
557/308	117	142	25
557/309	122	146	24
557/310	122	146	24
557/311	123	146	24

Despite the increase in height proposed as part of the project, it is not anticipated that the new structures will be visible from any publicly accessible vantage points within the Chickahominy Bluff tract of the Richmond National Battlefield Park. Although the tract abuts the project ROW, all public areas are set at the opposite end of the property with thick woods between. The height and thickness of the woods, coupled with the lower elevation of project within the low-lying swampy areas will prevent the replacement structures from rising above the intervening vegetation. As such, there is no anticipated change in setting or view of this tract as a result of the project.

Beaver Dam Creek Interpretative Area

The Beaver Dam Creek area is located on the south side of Cold Harbor Road along Beaver Dam Creek. The land associated with this tract extends along Beaver Dam Creek to the Chickahominy River where it is directly crossed by a short length of the project ROW and four structures to be replaced as part of the project. This tract is mostly wooded but the front portion is bordered by modern residential development. A driveway extends from Cold Harbor Road and leads to a circular parking lot and a short walking path that leads to an interpretative sign along Beaver Dam Creek. The project alignment extends through the rear portion of the tract, through the low swampy area along the Chickahominy River. As such, the four structures on the park land that are to be replaced as part of the project range from 0.67 to 1.02 mile away from the public interpretive area. Inspection from locations throughout the accessible portions of the tract, including at the entrance, along the driveway, from the parking lot, and at the interpretative sign revealed no visibility of the existing transmission line due to the thick wooded area occupying the rear portions of the tract.

The four existing transmission line structures located on the park land currently range from 99 to 123 feet tall, and will be replaced with structures that will range from 119 to 152 feet tall, resulting in an increase of 20 to 34 feet for individual structures. Additional structures within the viewshed (one-half mile) currently range from 106 to 128 feet tall, and will be replaced with structures that will range from 141 to 151 feet tall, resulting in an increase of 18 to 34 feet for individual structures (Table 5-12). 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 one angle structure that will be replaced with a 3-pole structure.

Table 5-12: Existing and proposed heights of structures within one-half mile of the RNPB Chickahominy Bluff tract.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
On Park Land			
557/297	123	152	29
557/298	114	148	34
557/299	110	134	23
557/300	99	119	20
Within one-half mile			
557/294	120	149	29
557/295	126	150	24
557/296	128	151	24
557/301	106	141	34

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/302	128	146	18

Despite the increase in height proposed as part of the project, it is not anticipated that the new structures will be visible from any publicly accessible vantage points within the Beaver Dam Creek tract of the Richmond National Battlefield Park. Although the tract is crossed by the project ROW, all public areas are set at the opposite end of the property with thick woods between. The height and thickness of the woods, coupled with the lower elevation of project within the low-lying swampy areas will prevent the replacement structures from rising above the intervening vegetation. As such, there is no anticipated change in setting or view of this tract as a result of the project.

Gaines Mill/Watt House Interpretative Area

The Gaines Mill/Watt House area is located off Watt House Road on the south side of Cold Harbor Road. The land associated with this tract extends south to the Chickahominy River where it is directly crossed by a short length of the project ROW and two structures to be replaced as part of the project. This tract is a mix of open agricultural field and woodland. A portion of the tract at the end of Watt House Road is open to the public and has a parking lot and short walking path with interpretative signage for the Battle of Gaines Mill, while the larger portion of the tract is accessed by a separate gravel lane off Watt House Road and is not open to the public. The project alignment extends through the rear of the tract, near the Chickahominy River. As such, the two structures on the park land that are to be replaced as part of the project are roughly 0.62 and 0.66 mile away from the nearest publicly accessible area. Inspection from locations throughout the publicly accessible portions of the tract, including at the parking lot and walking trail generally revealed no visibility of the existing transmission line with the exception of the top of one structure above the treeline in the distance from the very end of the walking path. Inspection was also conducted from the portion of the tract that is not currently open to the public and this revealed that the existing transmission line is also generally screened from view from this area as well, however, the tops of two structures are visible above the treeline in the distance from a small knoll along the farm lane.

The two existing transmission line structures located on the park land are currently 127 and 146 feet tall, and will be replaced with structures that will be 156 and 165 feet tall, resulting in an increase of 19 and 29 feet for individual structures. Additional structures within the viewshed (one-half mile) currently range from 109 to 146 feet tall, and will be replaced with structures that will range from 140 to 165 feet tall, resulting in an increase of 14 to 24 feet for individual structures (Table 5-13). 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 5-13: Existing and proposed heights of structures within one-half mile of the RNBP Gaines Mill/Watt House tract.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
On Park Land			
557/281	127	156	29
557/282	146	165	19

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
Within one-half mile			
557/279	132	156	24
557/280	130	154	24
557/283	146	165	19
557/284	126	140	14
557/285	109	142	33
557/286	133	152	19

With the increase in height proposed as part of the project, is not anticipated that will be a slight change in visibility of the structures that are currently visible from vantage points in the park, however, it is not anticipated that there will be any substantially new or expanded visibility of other structures to be replaced as part of the project. At present, just one structure is visible from a very discrete vantage point within the portion of the tract that is open to the public and while this structure will rise higher above the treeline that partially screens it from view, it is not expected that the new structure will be visible from any other vantage points, nor will any additional replacement structures be visible from this vantage. Similarly, the two structures visible from the closed portion of the tract will also rise slightly higher above the treeline they are visible above, however, it is not expected that the new structures will be visible from any other areas, nor will any additional replacement structures be visible from this vantage. Although the tract is crossed by the project ROW, that portion of the tract is not accessible, and all public areas are set at the opposite end of the property. As such, there is anticipated to be a slight change in setting and viewshed from this tract as a result of the project.

Cold Harbor Road Area

The Cold Harbor area is located on the north side of Cold Harbor Road along the banks of the Chickahominy River. The land is directly crossed by a short length of the project ROW and two structures to be replaced as part of the project. This tract is almost completely wooded and much of it is low and swampy. It is bordered by Turkey Hill Trail, however, there are no roads or access to the land within the park tract. This tract is not open to or accessible by the public. The project alignment extends through the southern portion of the tract, just in from Cold Harbor Road, and through the low swampy area bordering the Chickahominy River. There are two structures on the park land that are to be replaced as part of the project, set range from 0.27 and 0.53 mile away from the road. There is no public pull-off or parking along this length of the road, and there is one additional structure to be replaced as part of the project set closer to the road, between it and the park boundary. Inspection from Cold Harbor Road where it abuts the edge of the park land revealed only limited visibility of the existing transmission line conductor as it is suspended over the road. All structures are screened by the dense woodland that borders both sides of the road. Inspection from Cold Harbor Road just to the north, where the project ROW crosses the road reveals visibility of multiple structures in both directions, up and down the ROW, however, as noted, the two on park land are set beyond an additional structure in closer proximity to the road.

The two existing transmission line structures located on the park land are currently 124 and 126 feet tall, and will be replaced with structures that will be 148 and 155 feet tall, resulting in an

increase of 24 and 29 feet for individual structures. Additional structures within the viewshed (one-half mile) currently range from 122 to 132 feet tall, and will be replaced with structures that will range from 147 to 156 feet tall, resulting in an increase of 24 to 29 feet for individual structures (Table 5-14). 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 5-14: Existing and proposed heights of structures within one-half mile of the RNBP Cold Harbor Road tract.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
On Park Land			
557/276	124	148	24
557/277	126	155	29
Within one-half mile			
557/273	125	154	29
557/274	122	147	24
557/275	124	153	29
557/278	130	154	24
557/279	132	156	24

Despite the increase in height proposed as part of the project, there will not be any visibility of the replacement structures from the park tract as it is not open to accessible by the public. From the short length of the park land that immediately borders Cold Harbor Road where the existing structures are screened by woodland, it is anticipated that the replacement structures will remain screened due to the angle of view. The only vantage in the vicinity of this park tract where visibility is expected is from where the project ROW crosses the road, but from this vantage, multiple structures are already visible up and down the ROW in both directions, and therefore the change in view would be limited to different structures, but with no new visibility of any additional structures not currently seen. One of the structures located on park land is also already visible from the Seven Pines Interpretive area just south of the Chickahominy River. While the structure is not visible from the parking lot or wayside kiosk, a walking trail to the river allows views of one existing structure through the vegetation bordering the river. The replacement structure is anticipated to remain visible, however, it will continue to be screened from view from the wayside kiosk, and no additional structures are anticipated to become visible from the walking trail.

As such, the project is anticipated to introduce a slight change in view of the transmission line from discrete vantage points within just one of the four tracts of the park located within one mile of the project. This was confirmed with photo simulation from multiple representative locations through the park tracts. Where visible, views would be limited to the replacement of structures that are already visible, and be further limited to only the tops of structures above treelines in the distance. This includes one structure partially visible from the extreme end of a public walking path at the Gaines Mill/Watt House tract and two partially visible from the middle of a field in that tract that is not open to or accessible by the public. The replacement structures will remain completely screened from view from all other publicly accessible vantage points and interpretative areas throughout the park tracts. Therefore, 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 it is D+A's opinion that the project will have no more than a ***minimal impact*** on the Richmond National Battlefield Park per VDHR's impact characterization scale.

Figure 5-78 depicts the four tracts of the Richmond National Battlefield Park within one mile of the project in relation to the project alignment and viewshed buffers. A detailed map of the Chickahominy Bluff tract, with the location and direction of all representative photographs and photo simulations are provided in Figure 5-80 through Figure 5-82, Beaver Dam Creek tract in Figure 5-83 through Figure 5-86, Gaines Mill/Watt House tract in Figure 5-87 through Figure 5-96 and Cold Harbor Road tract in Figure 5-97 through Figure 5-100.

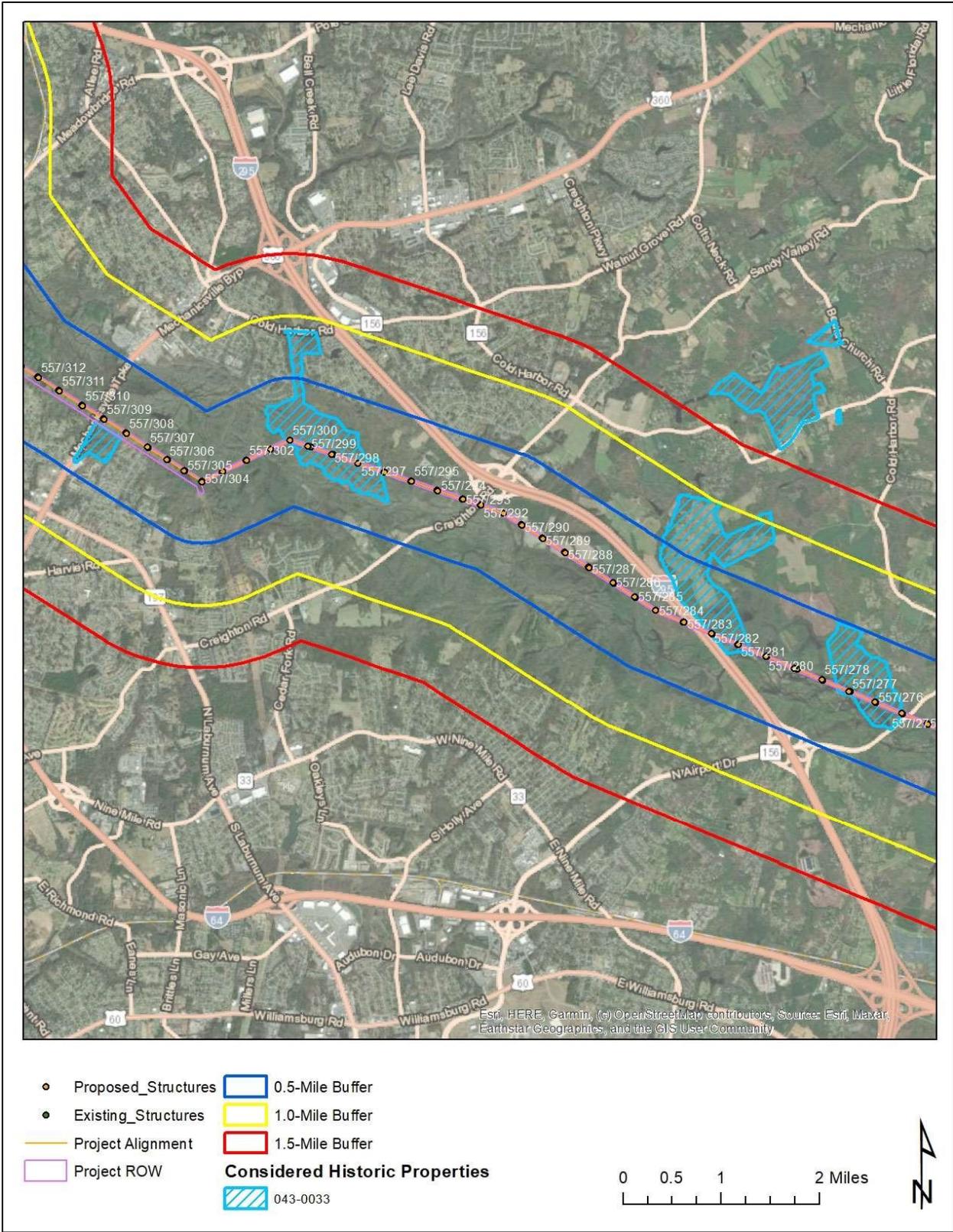


Figure 5-78: Richmond National Battlefield Park tracts in relation to the project alignment and study tiers.

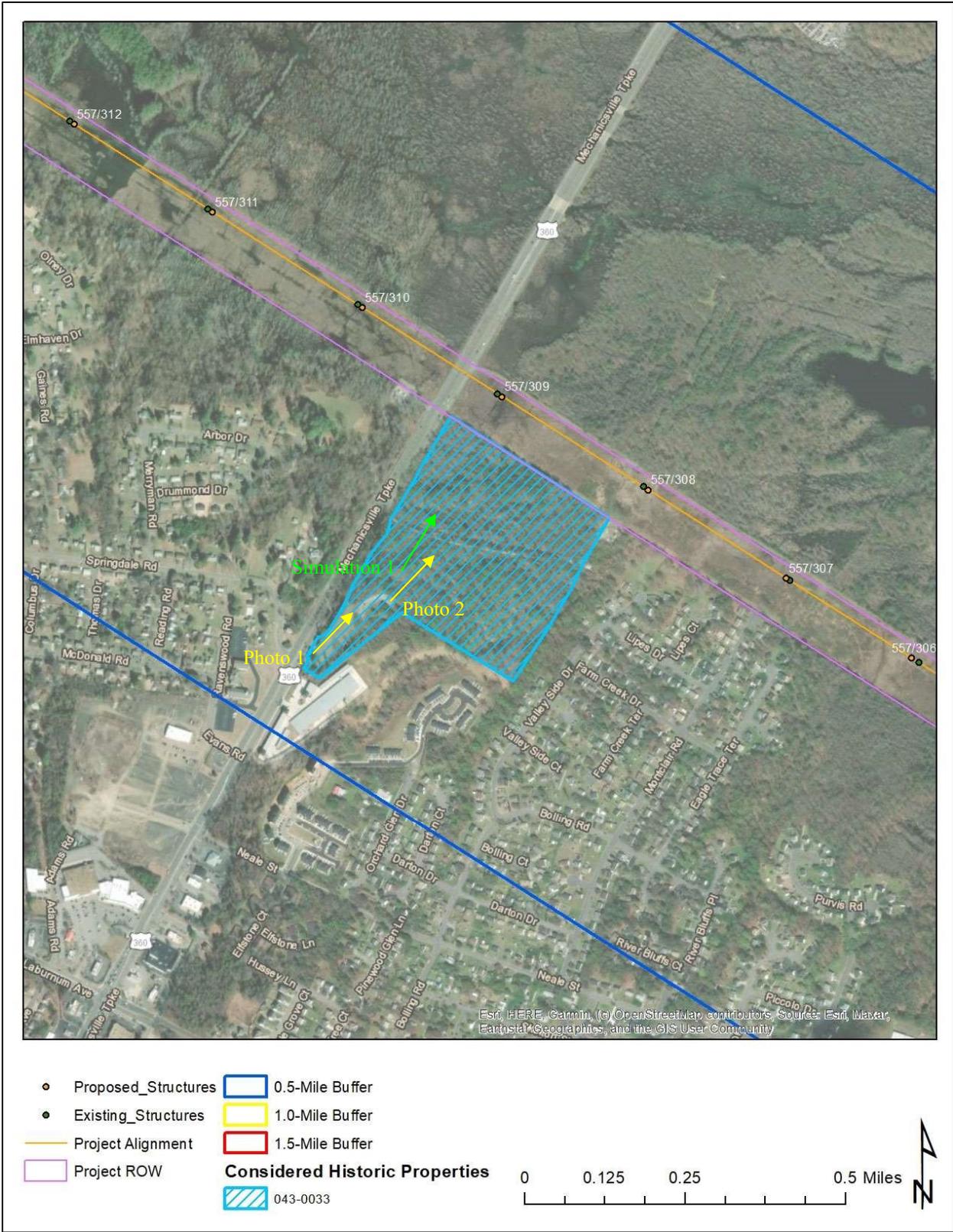


Figure 5-79: RBP Chickahominy Bluff Tract in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



Figure 5-80: Photo location 1- View from driveway to Chickahominy Bluff interpretive site parking lot, facing northeast.



Figure 5-81: Photo location 2- View from Chickahominy Bluff overlook kiosk, facing north.



Figure 5-82: Photo Simulation 1 – Existing (above) and proposed (below) view from Chickahominy Bluff interpretative area, facing north. All structures shown in yellow to remain screened behind vegetation.

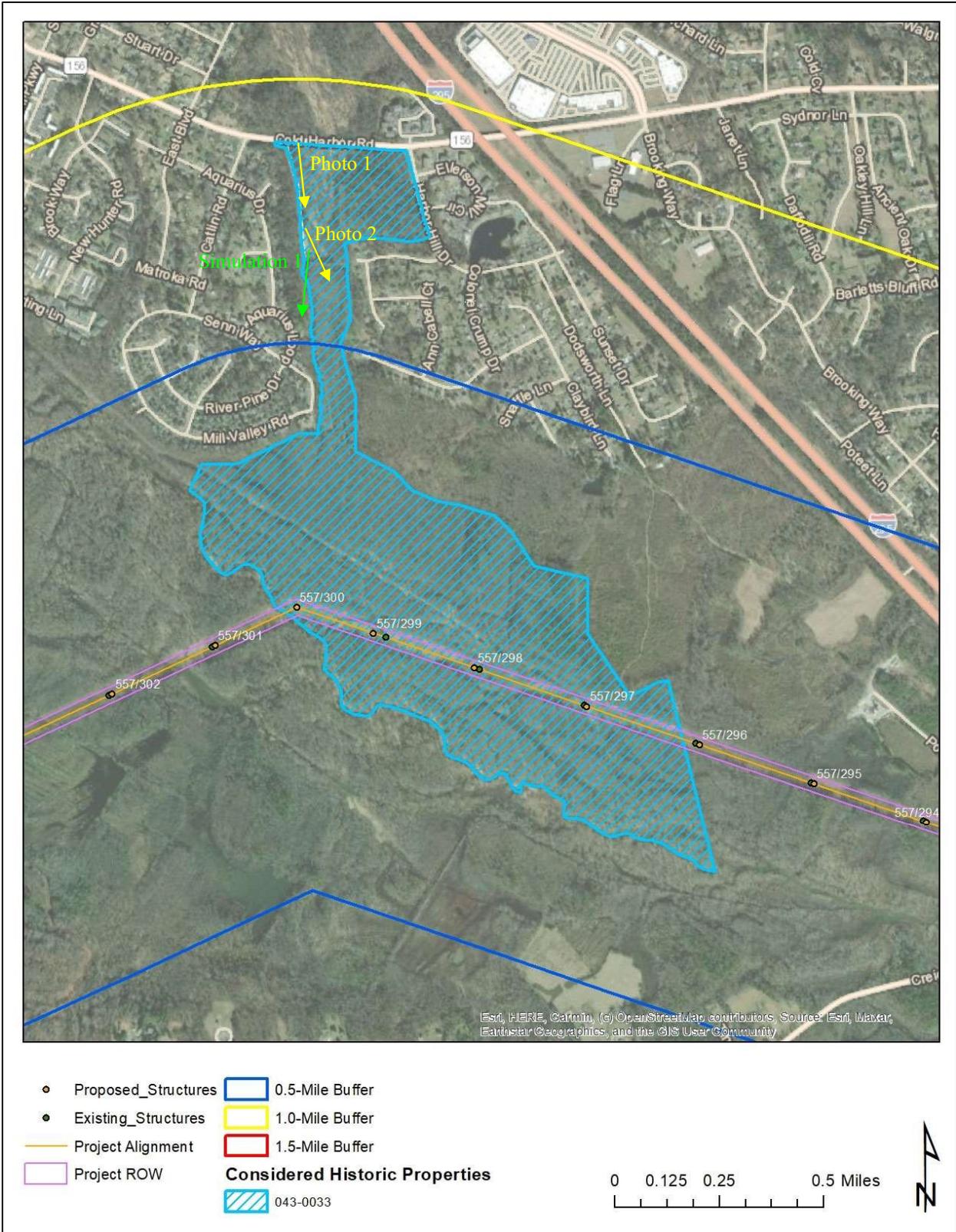


Figure 5-83: RBNP Beaver Dam Creek Tract in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



Figure 5-84: Photo location 1- View from driveway to Beaver Dam Creek interpretive site, facing south.



Figure 5-85: Photo location 2- View from Beaver Dam Creek interpretive site parking lot, facing south.



Figure 5-86: Photo Simulation 1 – Existing (above) and proposed (below) view from Beaver Dam Creek Battlefield interpretative area, facing south. All structures shown in yellow to remain screened behind vegetation.

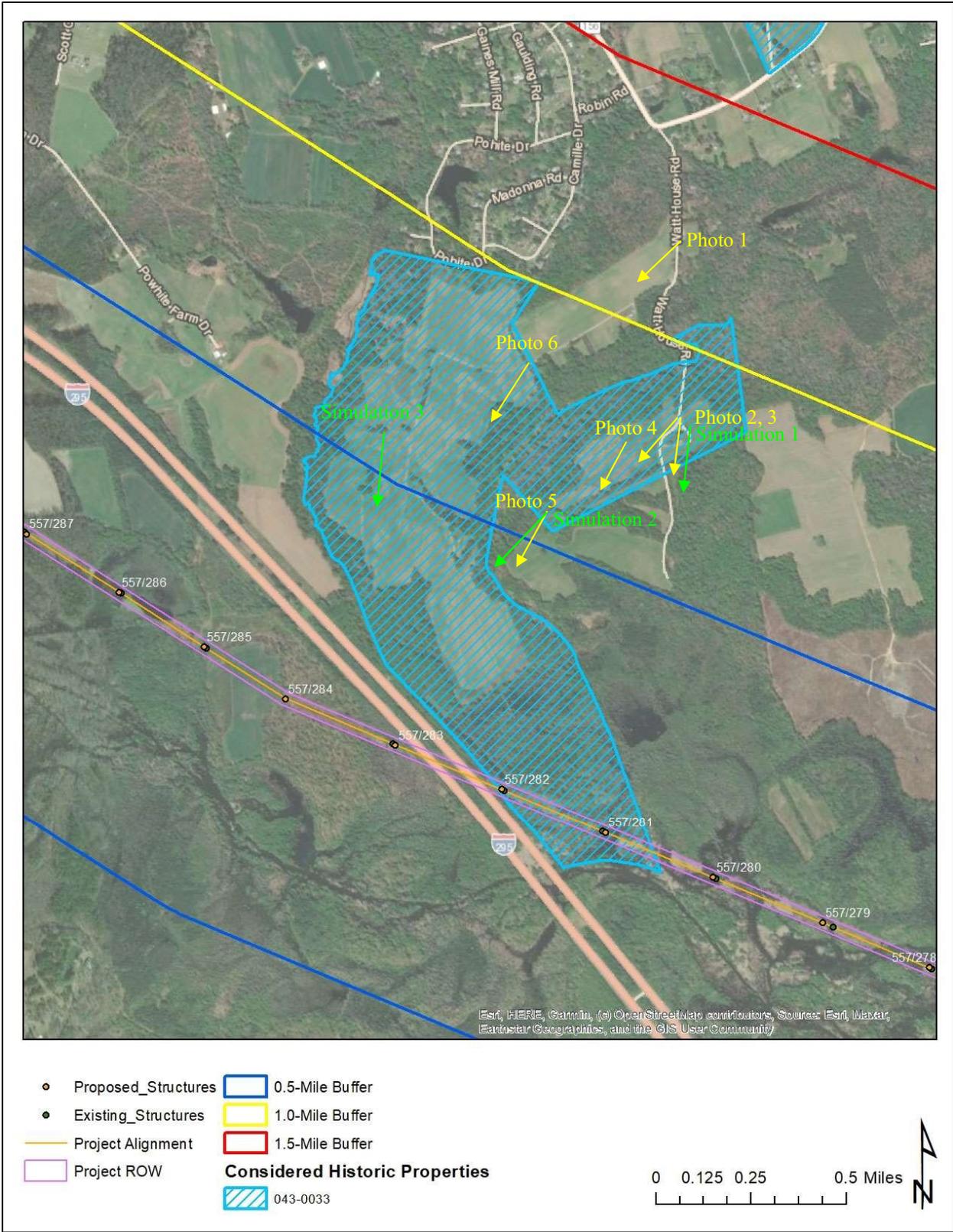


Figure 5-87: RBNP Gaines Mill/Watt House Tract in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



Figure 5-88: Photo location 1- View from Mississippi Monument parking lot at Gaines Mill, facing southwest.



Figure 5-89: Photo location 2- View from Gaines Mill interpretive site parking lot, facing southwest.

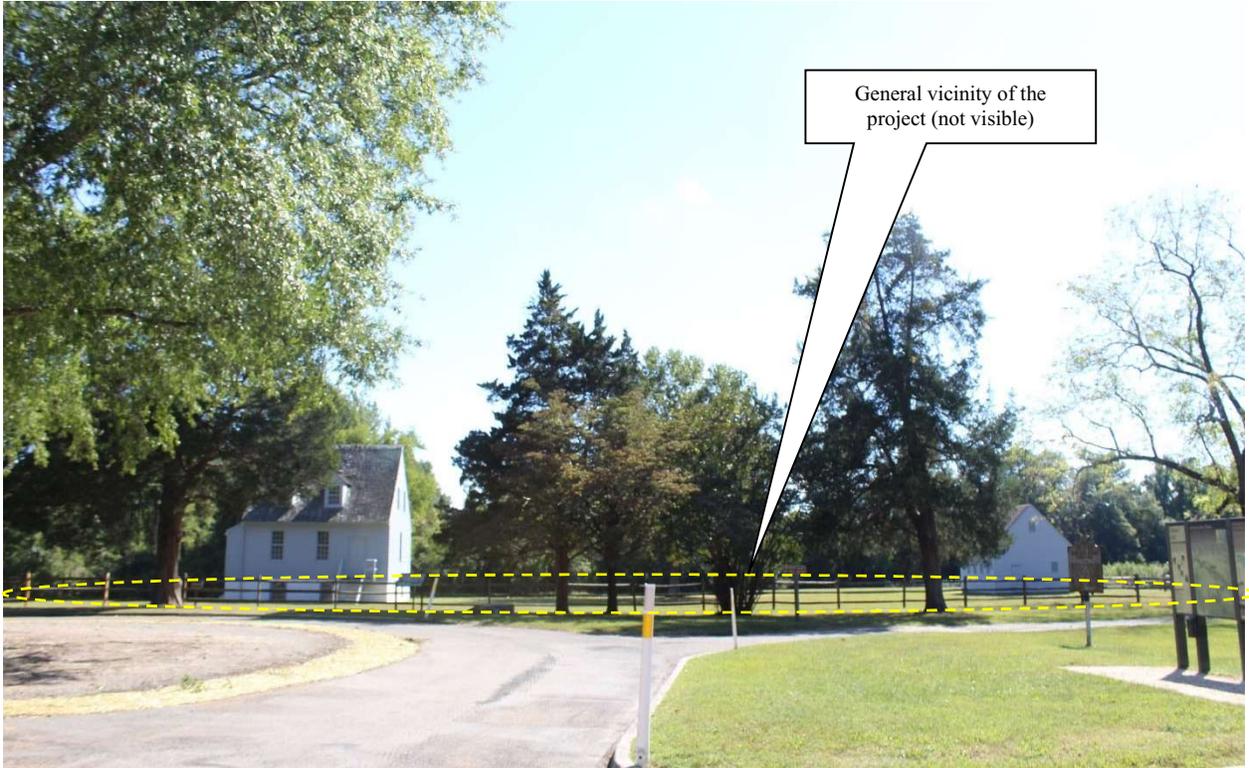


Figure 5-90: Photo location 3- View from Watt House parking lot, facing south.



Figure 5-91: Photo location 4- View from hiking trail at Gaines Mill interpretive site, facing southwest.



Figure 5-92: Photo location 5- View from end of hiking trail at Gaines Mill interpretive site, facing southwest.



Figure 5-93: Photo location 6- View from Watt House Road in Gaines Mill Battlefield area, facing southwest.



Figure 5-94: Photo Simulation 1 – Existing (above) and proposed (below) view from Gaines Mill/Watt House parking area, facing south. All structures shown in yellow to remain screened behind vegetation.

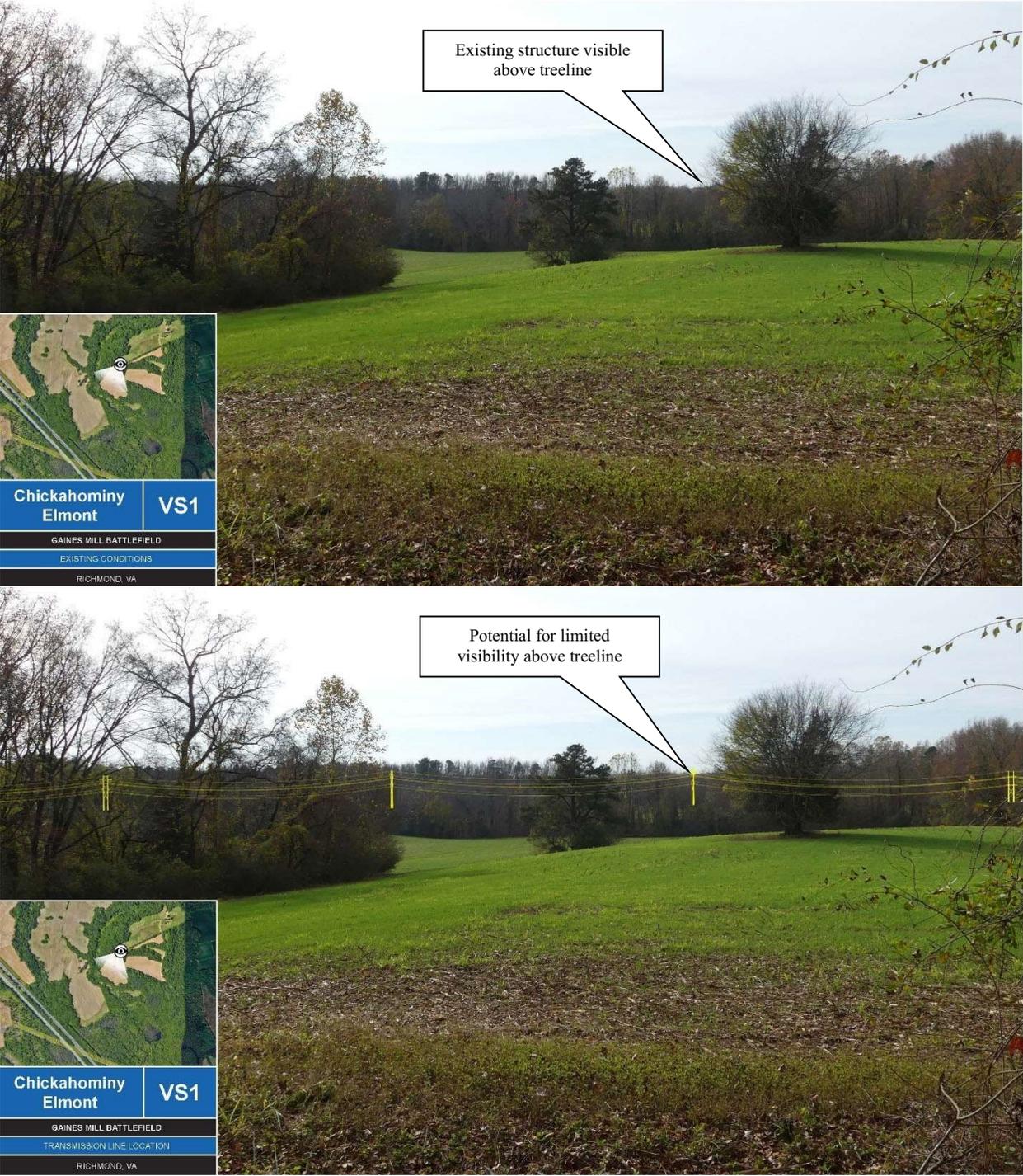


Figure 5-95: Photo Simulation 2 – Existing (above) and proposed (below) view from end of Gaines Mill Battlefield hiking trail, facing southwest. All structures shown in yellow to remain screened behind vegetation. Top of one structure will remain visible above treeline.



Figure 5-96: Photo Simulation 3 – Existing (above) and proposed (below) view from farm field within closed portion of Gaines Mill tract, facing south. All structures shown in yellow to remain screened behind vegetation. Top of one structure will remain visible above treeline.

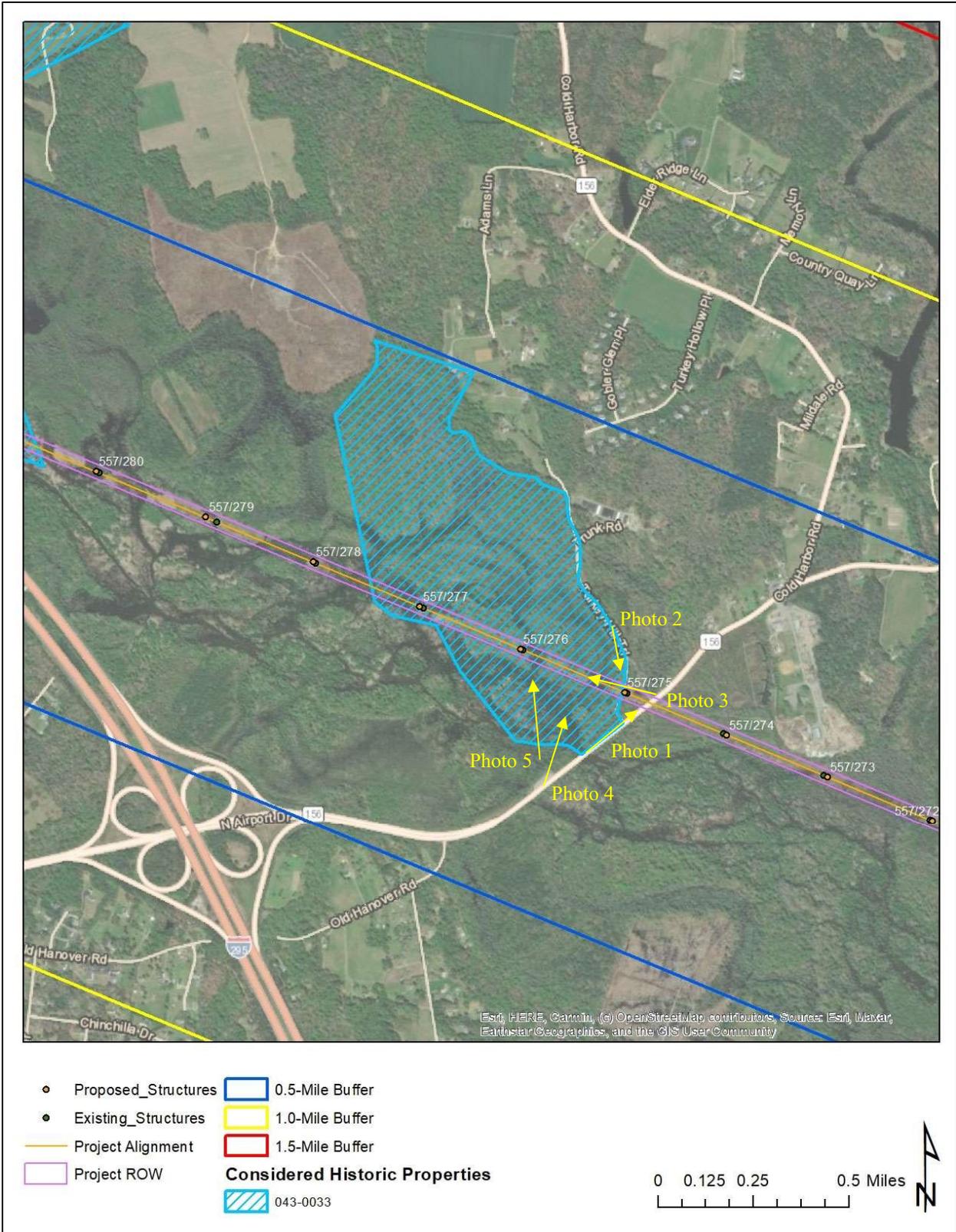


Figure 5-97: RBNP Cold Harbor Road Tract in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



Figure 5-98: Photo location 1- View from Cold Harbor Road along edge of park tract, facing north.



Figure 5-99: Photo location 2- View from Turkey Hill Trail along edge of park tract, facing southeast.

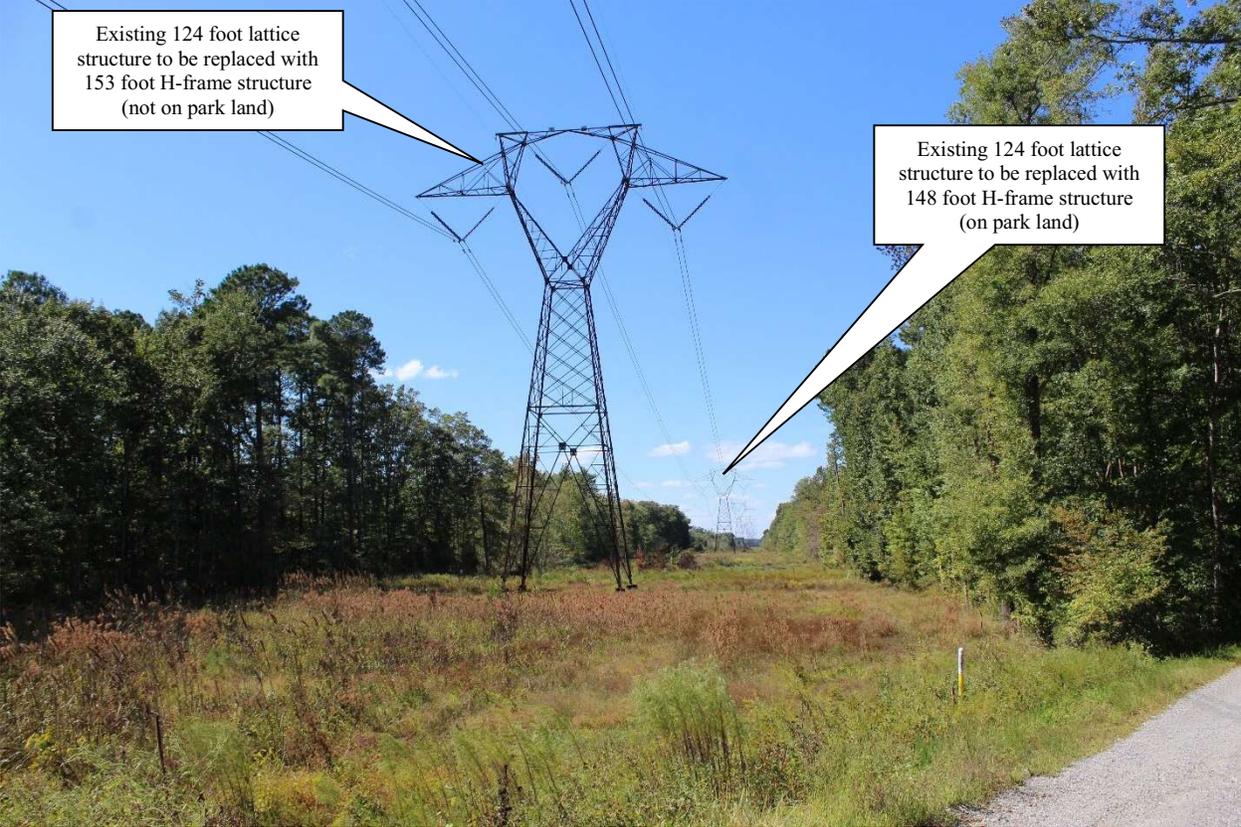


Figure 5-100: Photo location 3- View from Cold Harbor Road at ROW crossing, facing west.



Figure 5-101: Photo location 4- View from Seven Days Battle wayside, facing northwest.



Figure 5-102: Photo location 5- View from Seven Days Battle walking path, facing northwest.

VDHR# 043-0175
Ravenswood

Ravenswood, located at 2300 Springdale Road, was built in 1845 in a Greek Revival style. The two-story frame structure rests on a brick foundation laid in an American bond and topped by a side-gable roof sheathed in standing seam metal. It is clad in flush wood similar to Mount Vernon and is the only known house in the state with flush wood siding. The house features two brick exterior end chimneys and six-over-six double-hung sash windows. A one-story, partial-width porch topped by a hipped roof is centered on the front elevation. Originally laid out in a single-pile, central passage plan, modern aerials show a one-story rear addition that doubles the depth of the house.

Ravenswood is located on the north side of Springdale Road just east of Mechanicsville Turnpike within a modern housing development. It is architecturally significant as a well-preserved early Greek Revival home, and as such is considered potentially eligible for listing in the NRHP under Criterion C at the local level.

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 generally extends through the landscape to the north and east of the property on which Ravenswood is located, roughly 0.29 mile away 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 publicly-accessible locations along the road in front of the property 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 Springdale Road to model the proposed appearance of the replacement structures in relation to existing structures.

Ravenswood is located on a small property within what is now a suburban residential neighborhood comprised of twentieth century homes. The home rests on a grassy lawn that is edged by treelines and bordered by other residential properties beyond.

Inspection was conducted from along Springdale Road to the front of the property. From this length of road, the existing transmission line to be replaced as part of this project is completely screened from view by the intervening vegetation. The line is flanked by another transmission line within the shared ROW that is taller, and it is also not visible.

The existing transmission line structures located within the viewshed of the property (one-half mile) currently range from 117 to 123 feet tall, and will be replaced with structures that will range from 142 to 146 feet tall, resulting in an increase of 24 to 25 feet for individual structures (Table 5-15). 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, and remain shorter than the structures on the adjacent line in the shared ROW.

Table 5-15: Existing and proposed heights of structures within one-half mile of Ravenswood.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/308	117	142	25
557/309	122	146	24
557/310	122	146	24
557/311	123	146	24

Despite this increase in height, it is not anticipated that there will be any visibility of the replacement structures from the property. This was confirmed with 3D model rendering from in front of the property. The intervening distance, topography, vegetation will continue to screen all views of the transmission line from the property.

As such, the project will not introduce any change in setting or viewshed of or from the property. The new structures will remain shorter than other existing transmission structures in the shared ROW, and not be visible from anywhere within or along the road in front 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 Ravenswood per VDHR’s impact characterization scale.

Figure 5-103 illustrates the location of Ravenswood 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 5-104 through Figure 5-107.

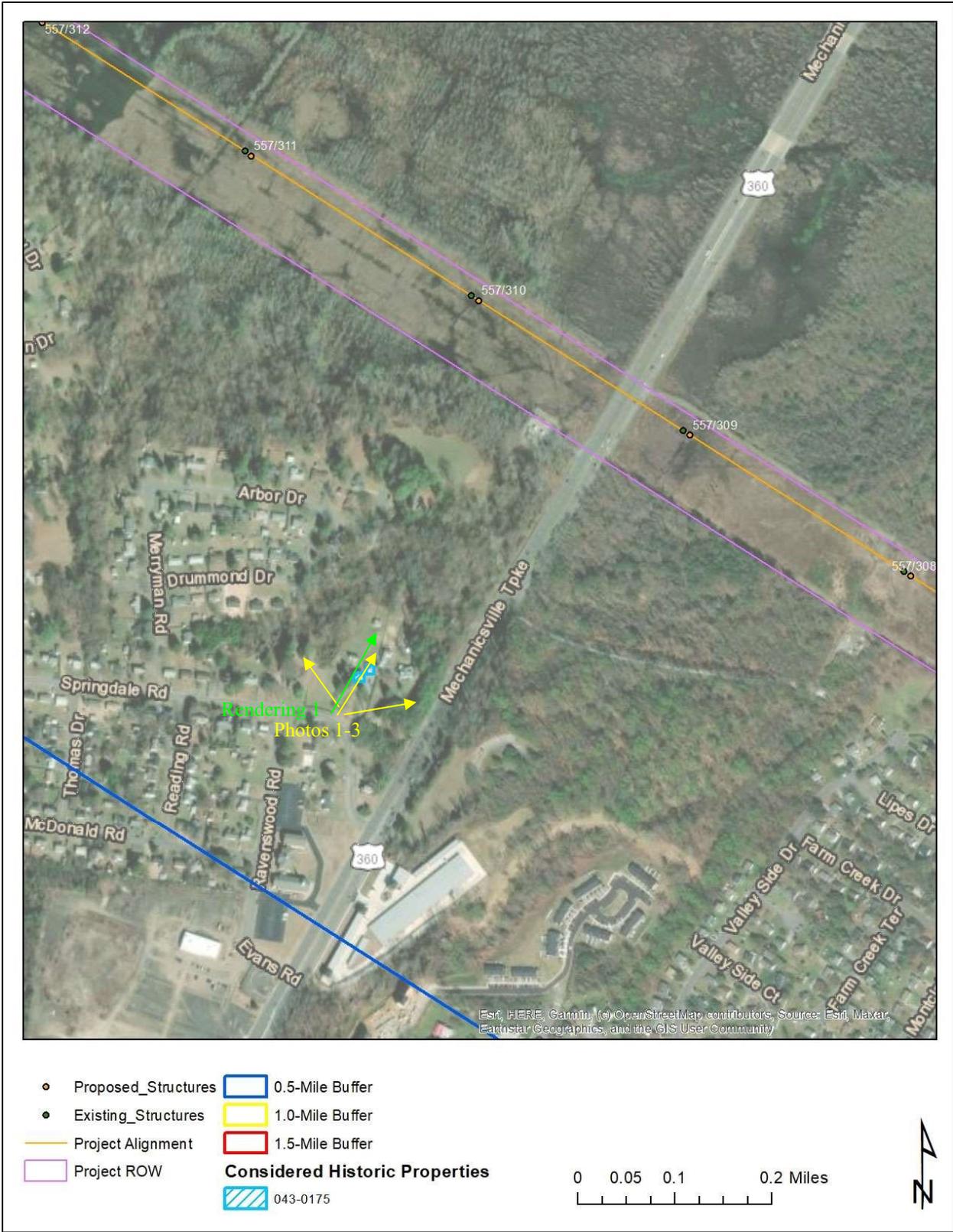


Figure 5-103: Ravenswood in relation to the project alignment with locations and direction of representative photographs shown in yellow and photo simulation shown in green.



Figure 5-104: Photo location 1- View from Springdale Road in front of property, facing northeast.



Figure 5-105: Photo location 2- View from Springdale Road in front of property, facing northwest.



Figure 5-106: Photo location 3- View from Springdale Road in front of property, facing northwest.



Figure 5-107: Rendering 1 - model of proposed structures and transmission line from front of Ravenswood (all project components screened behind vegetation). Source: Google Streetview

VDHR# 043-0307

Battle of Chaffin's Farm, New Market Road / New Market Heights Battlefield

The New Market Heights Battlefield extends across Henrico and Chesterfield counties and the City of Richmond in Virginia. It is located in the Atlantic Coastal Plain and is characterized by fairly level topography with a high knoll in the center of the battlefield. It contains archaeological sites, trenches, historic road beds, monuments, interpretive markers, and a cemetery. The landscape is characterized by a mix of rural and residential areas. Scattered residential development and transportation routes have negatively impacted much of the historic landscape and viewsheds, but some areas have maintained their original rural character.

The Battle of Chaffin's Farm and New Market Heights took place from September 29-30, 1864 as part of the Richmond-Petersburg Campaign. The battle was part of General Grant's dual-offensive plan to capture both Richmond and Petersburg, for which Major General Benjamin Butler was tasked with driving toward Richmond. Union forces succeeded in taking New Market Heights and Fort Harrison after a fight around Chaffin's Farm but were halted from further advance by Confederate counterattacks. They were also unable to capture that Confederate Forts Gilmer, Gregg, and Johnson, which were the other objectives of the mission. The two armies were pushed into trench warfare that lasted the remainder of the war. The battlefield is significant on a national level under Criterion A for the role played by Black soldiers in the fight and the subsequent recognition of their gallantry with the award of 14 Medals of Honor. It is also significant under Criterion B for its association with Major General Butler along with a few other northern military leaders. As such, the battlefield is considered potentially eligible for listing in the NRHP.

As a *battlefield* located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Chaffin's Farm Battlefield occupies a large landscape spread throughout eastern Henrico County generally to the south and west of the project alignment. Only a small, discrete portion of the edge of the battlefield is located within one mile of the project while the rest of the battlefield is well further away. A small portion of battlefield "core area" as delineated by the ABPP is located within one mile, however, the other core areas are further than one mile away. No portion of the battlefield is crossed by the project alignment. As such, there will be no direct impact to the battlefield as part of the project.

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.

The portion of the battlefield located within one mile of the project, including the small portion of core area, has been heavily fractured by modern development. Nearly all of the setting of this portion of the battlefield is characterized by suburban residential and commercial development. A separate electrical transmission line corridor, with no relation to the project alignment, also crosses through this portion of the battlefield.

Inspection from various vantage points throughout the battlefield located within one mile of the project found that the existing transmission line is not visible due to the intervening distance,

vegetation, and development. From no vantage point within the portion of the battlefield located within one mile, including the core area, is any infrastructure associated with the project visible.

The existing transmission line structures within one mile of the battlefield currently range from 90 to 128 feet tall, and will be replaced with structures that will range from 119 to 152 feet tall, resulting in an increase of 18 to 34 feet for individual structures (Table 5-16). 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 two corner structures that will be replaced with 3-pole structures.

Table 5-16: Existing and proposed heights of structures within one mile of the Chaffin’s Farm Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/297	123	152	29
557/298	114	148	34
557/299	110	134	23
557/300	99	119	20
557/301	106	141	34
557/302	128	146	18
557/303	117	142	24
557/304	90	124	34
557/305	100	129	29
557/306	97	132	34
557/307	118	137	19
557/308	117	142	25
557/309	122	146	24

Even with the increase in height proposed as part of the project, it is not anticipated that there will be any visibility of the replacement structures from the battlefield. The intervening distance, topography, vegetation, and development patterns will continue to screen all views of the transmission line from all vantage points within the battlefield.

As such, the project will not introduce any change in the setting or viewshed of or from the battlefield. 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 Chaffin’s Farm Battlefield per VDHR’s impact characterization scale.

Figure 5-108 depicts the overall limits of the Chaffin’s Farm Battlefield in relation to the project alignment and viewshed buffers. Figure 5-109 provides a detail of the portion of the battlefield located within one mile of the project, with the location and direction of all representative photographs. Figure 5-110 and Figure 5-112 provide representative photographs from the battlefield towards the project.

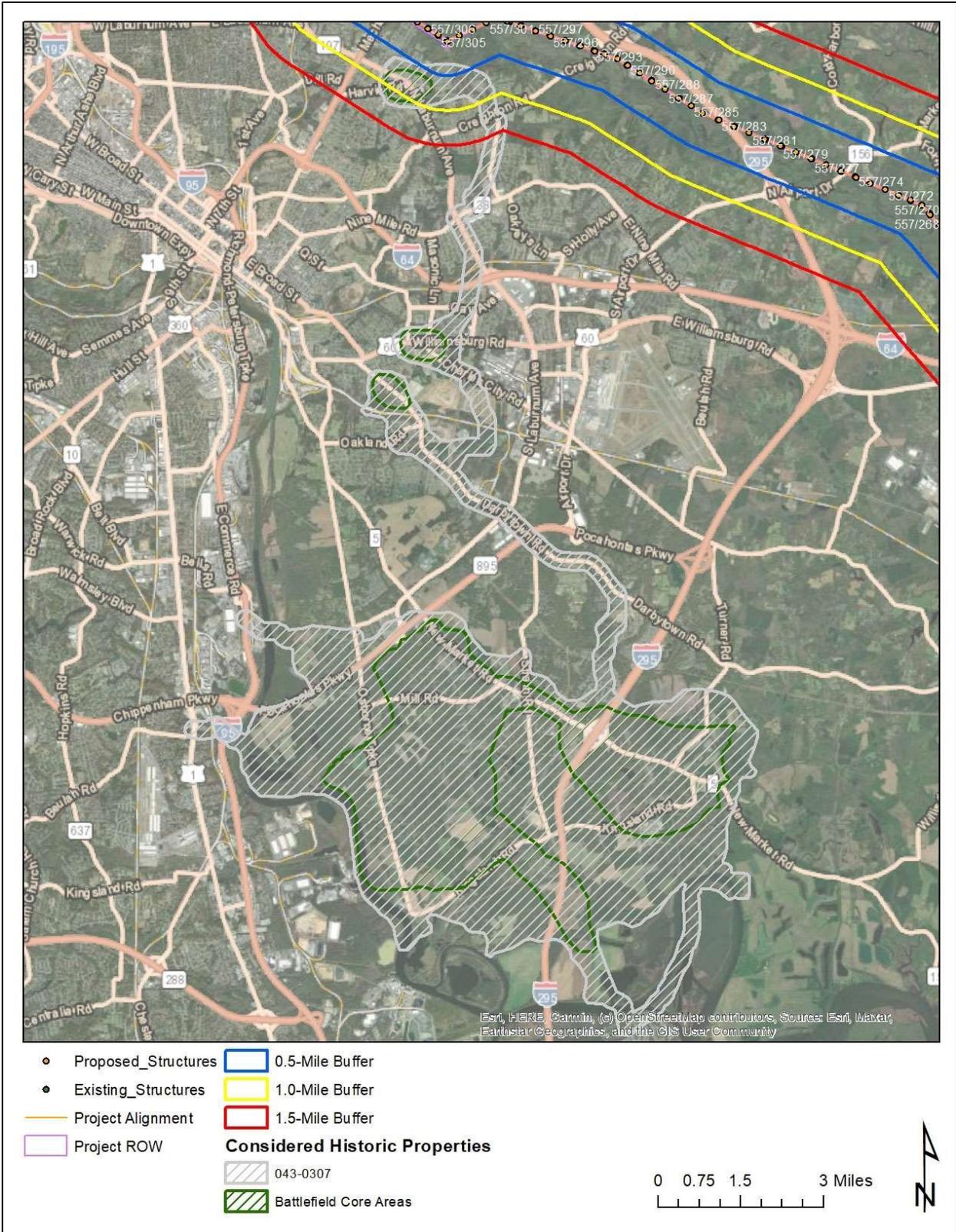


Figure 5-108: Overall limits of the Chaffin's Farm Battlefield with ABPP tiers in relation to the project.

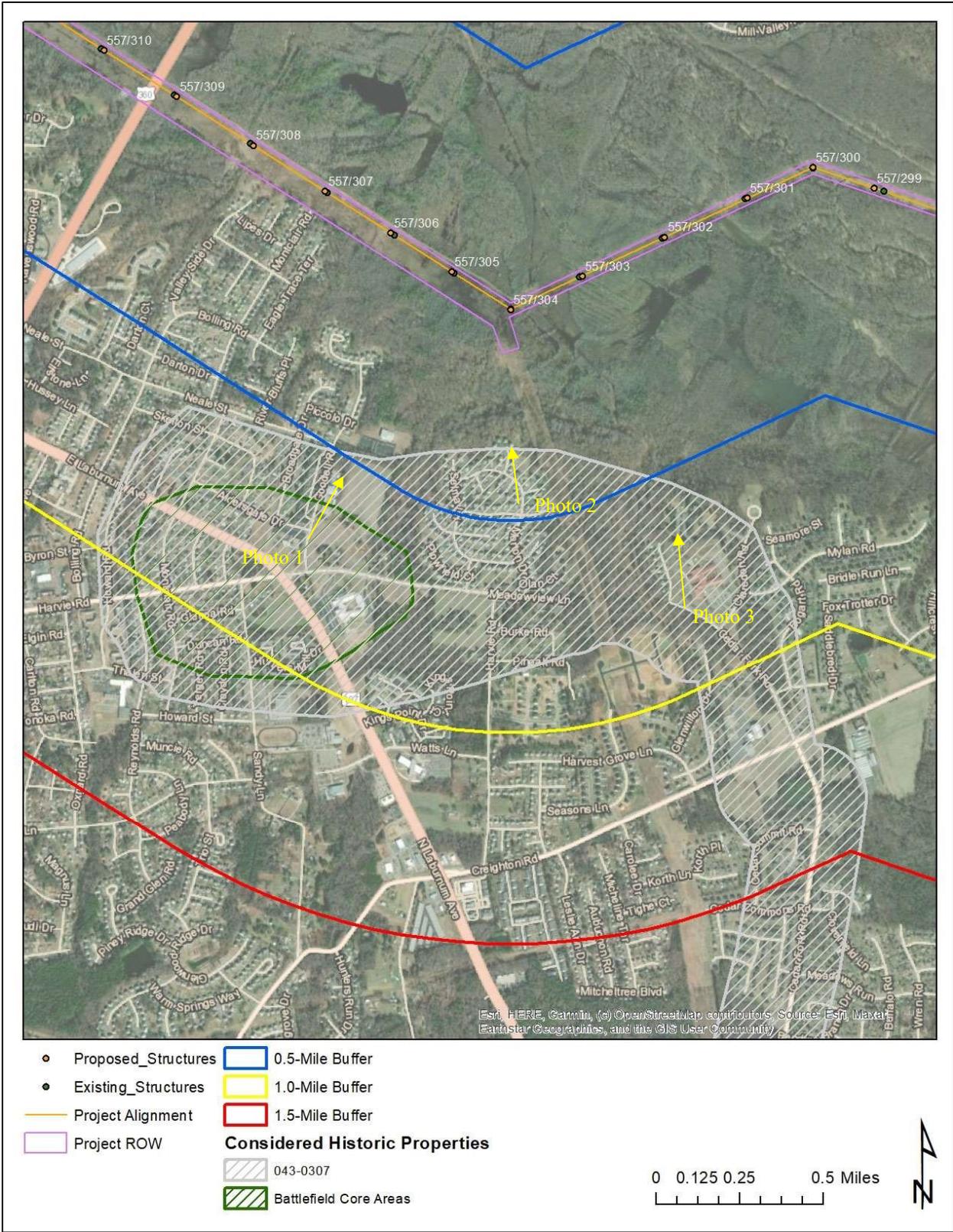


Figure 5-109: Chaffin’s Farm Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow.



Figure 5-110: Photo location 1- View from Goodell Road at Aldersgate Drive (core area), facing north.



Figure 5-111: Photo location 2- View from Morton Drive, facing north.



Figure 5-112: Photo location 3- View from Cedar Fork Road, facing north.

VDHR# 043-0308
Savage Station Battlefield

The Savage Station Battlefield occupies roughly 8,500 acres in Henrico, Hanover, and New Kent counties in Virginia. It consists of a mix of agricultural fields and wooded areas crossed by the Richmond and York River Railroad corridor and a network of drainages. Much of the areas has experiences heavy development with residential subdivisions, commercial and industrial areas, and major transportation corridors, although some portions of the battlefield remain relatively intact.

The Battle of Savage Station was fought on June 29, 1862 as part of McClellan's Peninsula campaign and was the fourth of the Seven Days' Battles. Savage Station served as a Federal headquarters and as a field hospital throughout the battles of the Seven Days, and there is evidence that mass graves and officers' burial sites are located nearby. After the Union defeat at Gaines Mill, they withdrew toward the James River and concentrated at the Savage Station field hospital. Confederate forces then mounted an assault on the Union army and forced them to withdraw across White Oak Swamp, abandoning supplies and more than 2,500 wounded soldiers. Heavy development has compromised the battlefield's integrity, but portions of the site continue to convey their historic setting despite modern intrusions. For its association with Civil War history, DHR previously determined the site to be potentially eligible for listing in the NRHP.

As a *battlefield* located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Savage Station Battlefield occupies a large landscape spread throughout eastern Henrico County generally to the south and west of the project alignment. While most of the battlefield and all of the battlefield "core area" as delineated by the ABPP is located beyond one mile from the project alignment, various portions, primarily including avenues of approach along roadways, are located within one mile. A total of six structures to be replaced as part of the project are located within these portions of the battlefield, however, the boundaries in these area drawn broadly around the alignment of the historical roads. Additional structures to be replaced are located within one mile of these various portions of the battlefield.

The portions of the battlefield crossed by the project generally coincide with avenues of approach to and from the battle. In the case of the Savage Station Battlefield, this includes three roads and one railroad corridor that cross the Chickahominy River from Hanover to Henrico County.

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.

The westernmost portion of the battlefield crossed by the project coincides with a historical road alignment that is no longer present east of Creighton Road. Therefore inspection was limited to vantage points in the vicinity. The other two road corridors within the battlefield that are crossed by the project, including Cold Harbor Road and Williamsburg Road both remain in use, although slightly re-aligned since the time of the battle. The fourth battlefield crossing is located along a railroad corridor that is not publicly accessible.

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. Because the transmission line corridor generally extends through the lower elevation areas bordering the Chickahominy River, and the portions of the battlefield within the vicinity generally coincide with historic crossings of the river, the most visibility of the existing transmission line is from the immediate vicinity of where the project crosses these corridors. Views of the existing transmission line from further away from the river in either direction generally become quickly screened by vegetation lining the corridors.

From along Cold Harbor Road, the existing transmission line and multiple structures are visible up and down the ROW in both directions where it crosses the road, however, visibility beyond that is generally limited to the conductor as it is suspended across the road. There is an interpretive wayside and parking area for the Seven Days Battle along Cold Harbor Road, just south of the Chickahominy River, and from the parking lot, the existing transmission line and all structures are completely screened from view by thick woodland. A short walking trail leads through the woods to the river where one existing structure is visible across a broad swampy area. Views from this avenue of approach to the battlefield north of the river, including Cold Harbor Road and Market Road revealed the intervening topography and vegetation screens views towards the project.

From along Williamsburg Road, the existing transmission line is generally screened from most locations other than where the alignment crosses what is now a length of White Oak Road due to thick vegetation in the area. There is also limited visibility of the top of one structure above the treeline from Williamsburg Road just east of the bridge over the Chickahominy River where the wider clearing allows this view.

The existing transmission line structures located within the battlefield crossed by the project currently range from 118 to 125 feet tall, and will be replaced with structures that will range from 147 to 154 feet tall, resulting in an increase of 24 to 29 feet for individual structures (Table 5-17). 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 5-17: Existing and proposed heights of structures within the Savage Station Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
Williamsburg Road Area			
557/254	123	147	24
Railroad Area			
557/259	124	153	29

Cold Harbor Road Area			
557/273	125	154	29
557/274	122	147	24
557/275	124	153	29
Creighton Road Area			
557/289	118	147	28

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, nor become visible from any substantially new or different vantages than where the existing transmission line is already visible. In most areas, it is not anticipated to rise above the treelines and the vegetation that currently screens the existing transmission line will continue to do so. The most visibility will be where the battlefield corridors coincide with modern roads that are crossed by the project and therefore there is already visibility of multiple structures up and down the ROW in both directions. In these areas, the new structures will be taller, but seen in conjunction with structures on an adjacent transmission line within the shared ROW that are not included in this project. The several existing structures that are visible from discrete vantage points within the battlefield beyond ROW crossings, including one from the Seven Days Battle interpretive area and one from the Williamsburg Road bridge will rise slightly taller above the treelines they are partially screened by, but it is not anticipated that any additional structures will become visible from these vantages. This was confirmed with photo simulation from multiple representative locations in the battlefield, including in the NPS land where it revealed there would be no additional visibility of structures beyond those that are already visible.

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. Other than ROW crossings, any visibility of the project will be limited to one structure, and only portions of those structures visible above intervening vegetation. 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 Savage Station Battlefield per VDHR's impact characterization scale.

Figure 5-113 depicts the overall limits of Savage Station Battlefield in relation to the project alignment and viewshed buffers. A detail of the portion of the battlefield within one mile of the project, with the location and direction of all representative photographs and photo simulations is provided in Figure 5-114. Figure 5-115 through Figure 5-128 provide representative photographs from the battlefield towards the project, as well as 3D renderings and photo simulations.

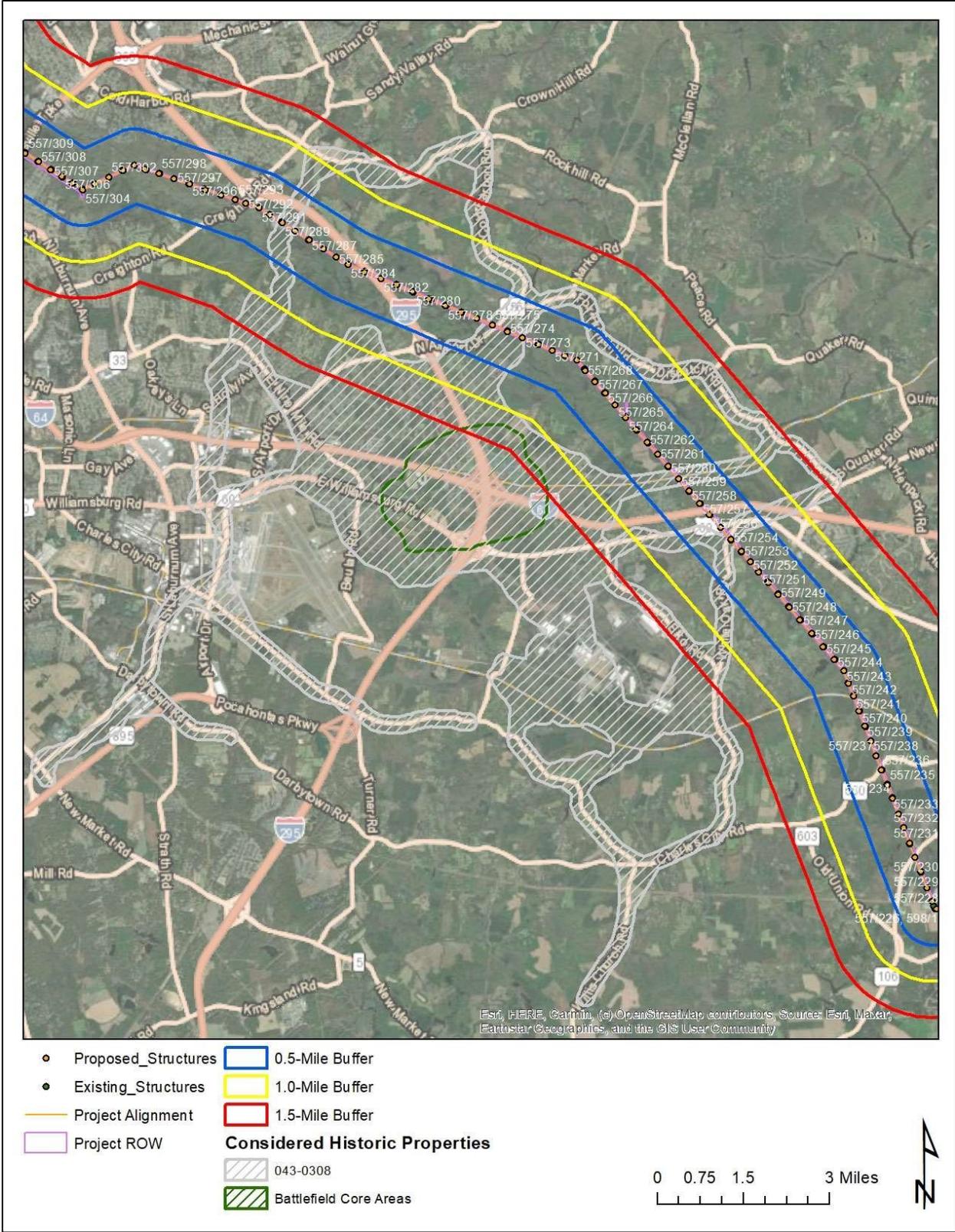


Figure 5-113: Overall limits of the Savage Station Battlefield with ABPP tiers in relation to the project alignment and study tiers.

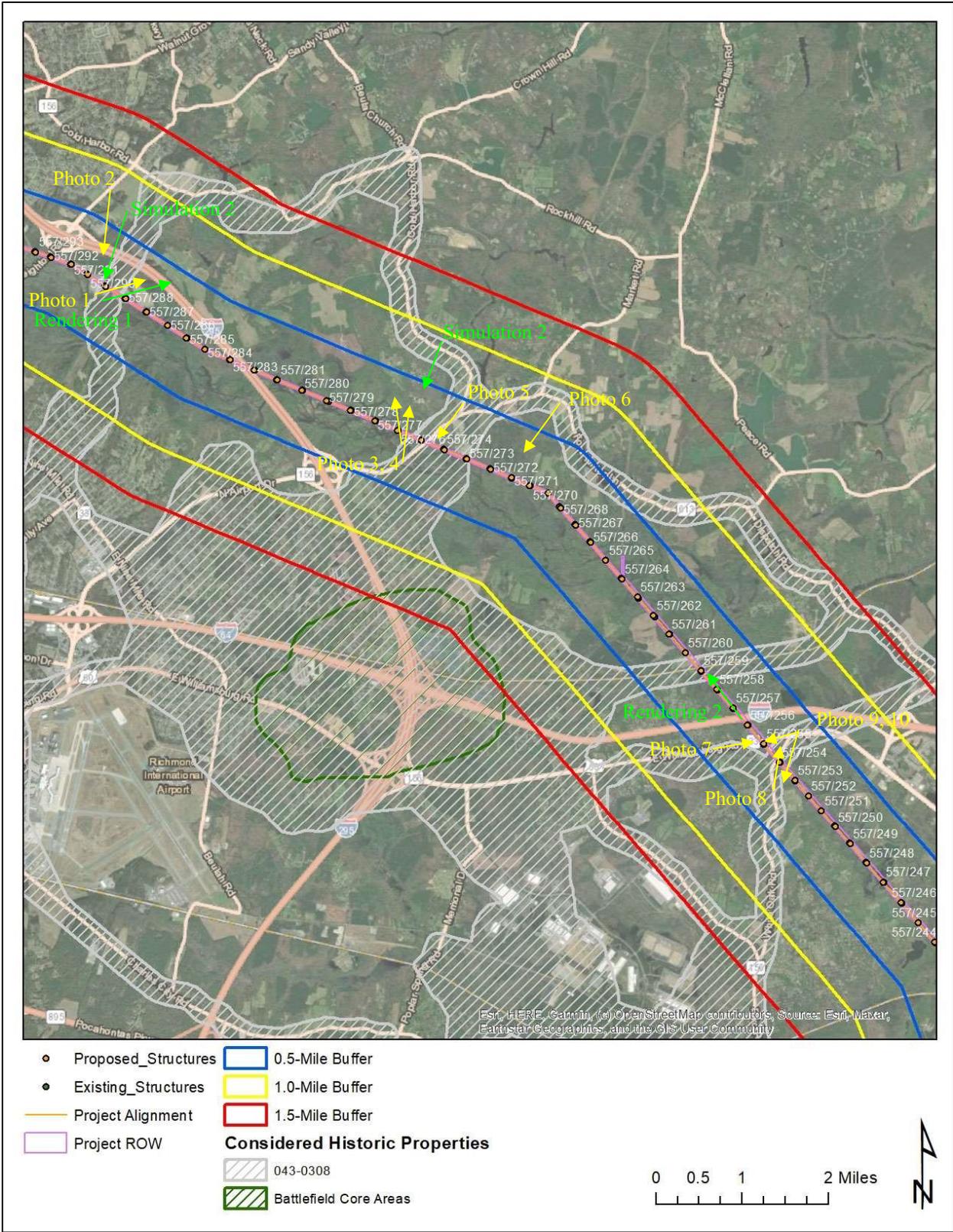


Figure 5-114: Detail of the Savage Station Battlefield with locations and direction of representative photographs shown in yellow and photo simulation and renderings shown in green.



Figure 5-115: Photo location 1- View from Hope Haven Drive within western approach, facing east.

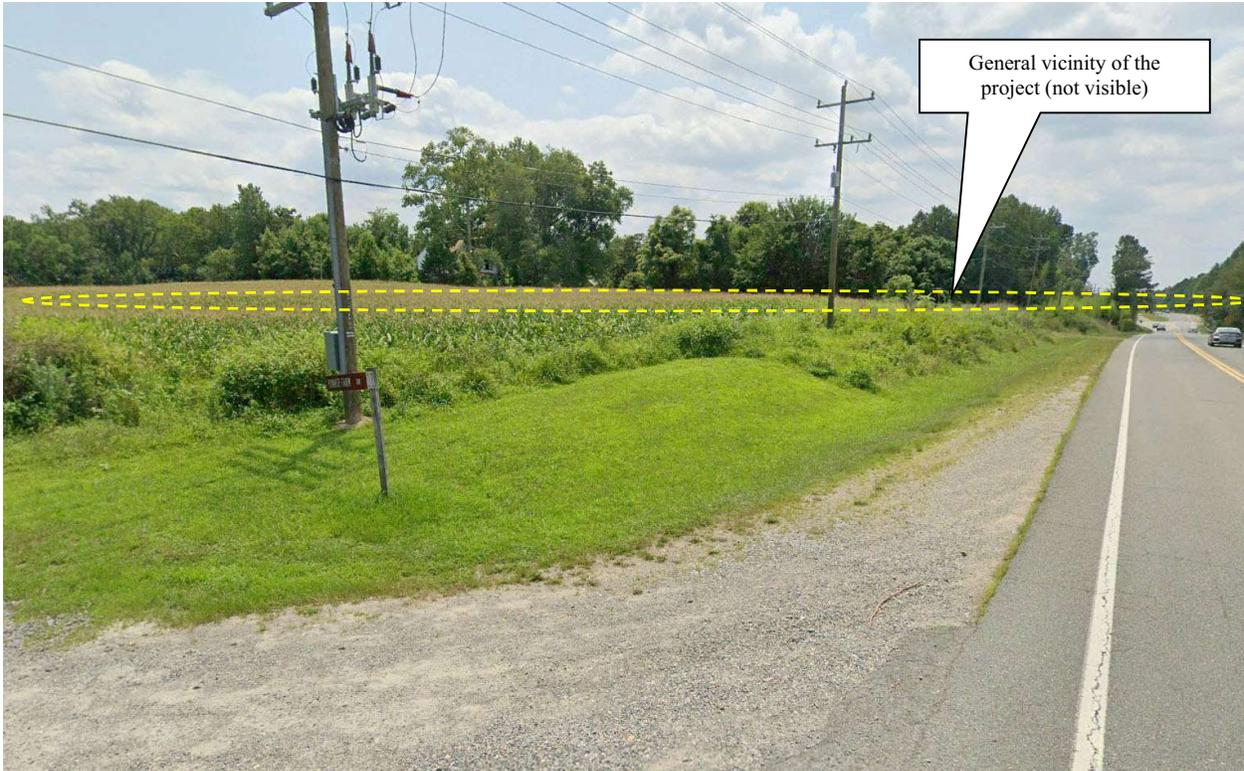


Figure 5-116: Photo location 2- View from Powhite Farm Road at Creighton Road, facing south.



Figure 5-117: Photo location 3- View from Seven Days Battle wayside, facing northwest.



Figure 5-118: Photo location 4- View from Seven Days Battle walking path, facing northwest.



Figure 5-119: Photo location 5- View from Cold Harbor Road at Market Road, facing southwest.



Figure 5-120: Photo location 6- View from Cold Harbor Road at Market Road, facing southwest.



Figure 5-121: Photo location 7- View from E Williamsburg Road west of Chickahominy River, facing east.



Figure 5-122: Photo location 8- View from White Oak Road south of E Williamsburg Road, facing northeast.



Figure 5-123: Photo location 9- View from E Williamsburg Road at Chickahominy Bridge, facing southwest



Figure 5-124: Photo location 10- View from E Williamsburg Road at Chickahominy Bridge, facing west

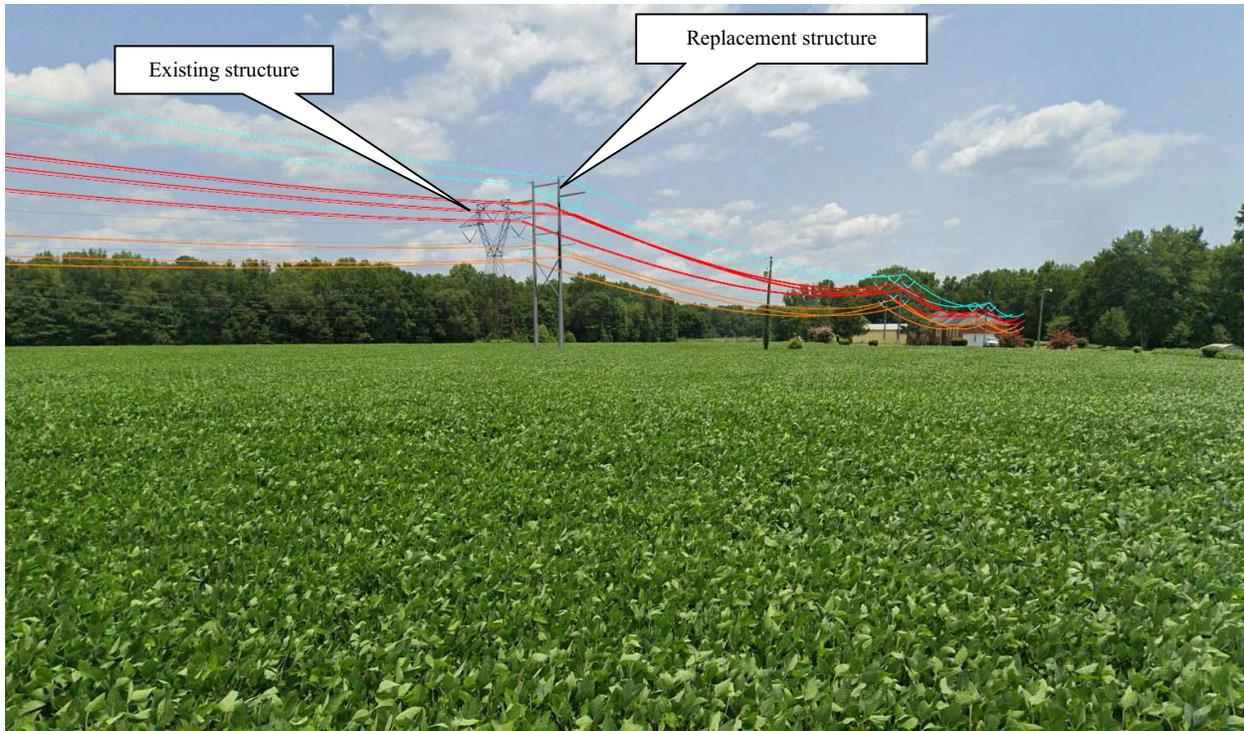


Figure 5-125: Rendering 1 - model of proposed structures and transmission line from Hope Haven Drive (replacement structure to be of similar height to structure on adjacent line not replaced as part of this project. Source: Google Streetview

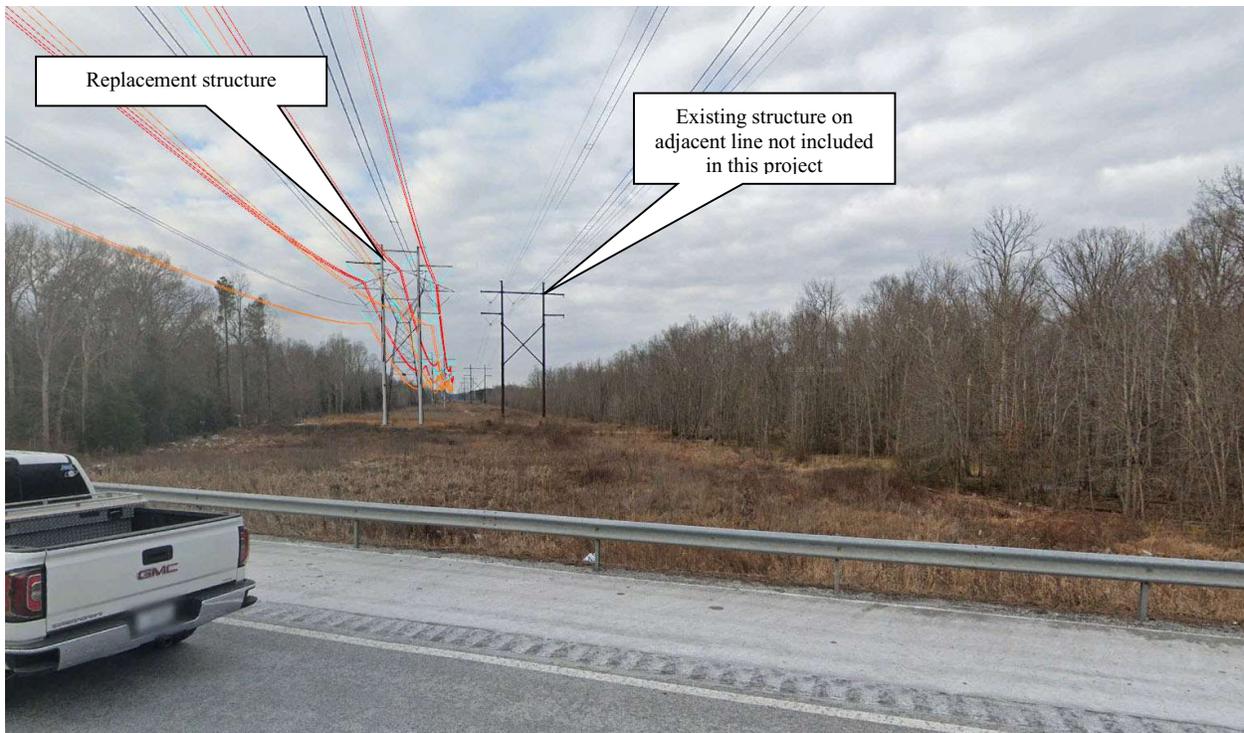


Figure 5-126: Rendering 2 - model of proposed structures and transmission line from Interstate 64 (replacement structure to be of similar height to structure on adjacent line not replaced as part of this project. Source: Google Streetview



Figure 5-127: Photo Simulation 1 – Existing (above) and proposed (below) view from Hogan House property along Powhite Farm Road near western approach of Savage Station Battlefield, facing south. All structures shown in yellow to remain screened behind vegetation.



Figure 5-128: Photo Simulation 2 – Existing (above) and proposed (below) view from Cold Harbor Road, facing south. All structures shown in yellow to remain screened behind vegetation.

VDHR# 043-0800

Antique Carousel, Virginia Center Commons

The antique carousel was built circa 1920 by Spillman Engineering Corporation. Originally, the carousel operated on the shoreline of Coeur d'Alene Lake in Idaho and later went into storage. It reappeared at a 1987 auction and was purchased by the Perron family. Its last known location was at Virginia Center Commons on the east side of Brook Road in Glen Allen, VA. A 1996 survey of the structure reported that it had been repainted, but no other alterations had been made. The carousel is no longer located at its original location at Virginia Center Common. It is unknown when and where it was moved, or if it is still extant in another location.

When the carousel was surveyed in 1996, DHR staff determined that it was eligible for listing in the VLR and NRHP under Criterion C, as it is significant at a local level in the areas of art, entertainment, and recreation, as well as architecture.

As this resource is no longer present, and is assumed to have been demolished, it is D+A's opinion that the Chickahominy-Elmont Project will result in *no impact* to the Antique Carousel. A map depicting the former location of the resource in relation to the project alignment is provided in Figure 5-129 and a photograph of existing conditions is provided in Figure 5-130.

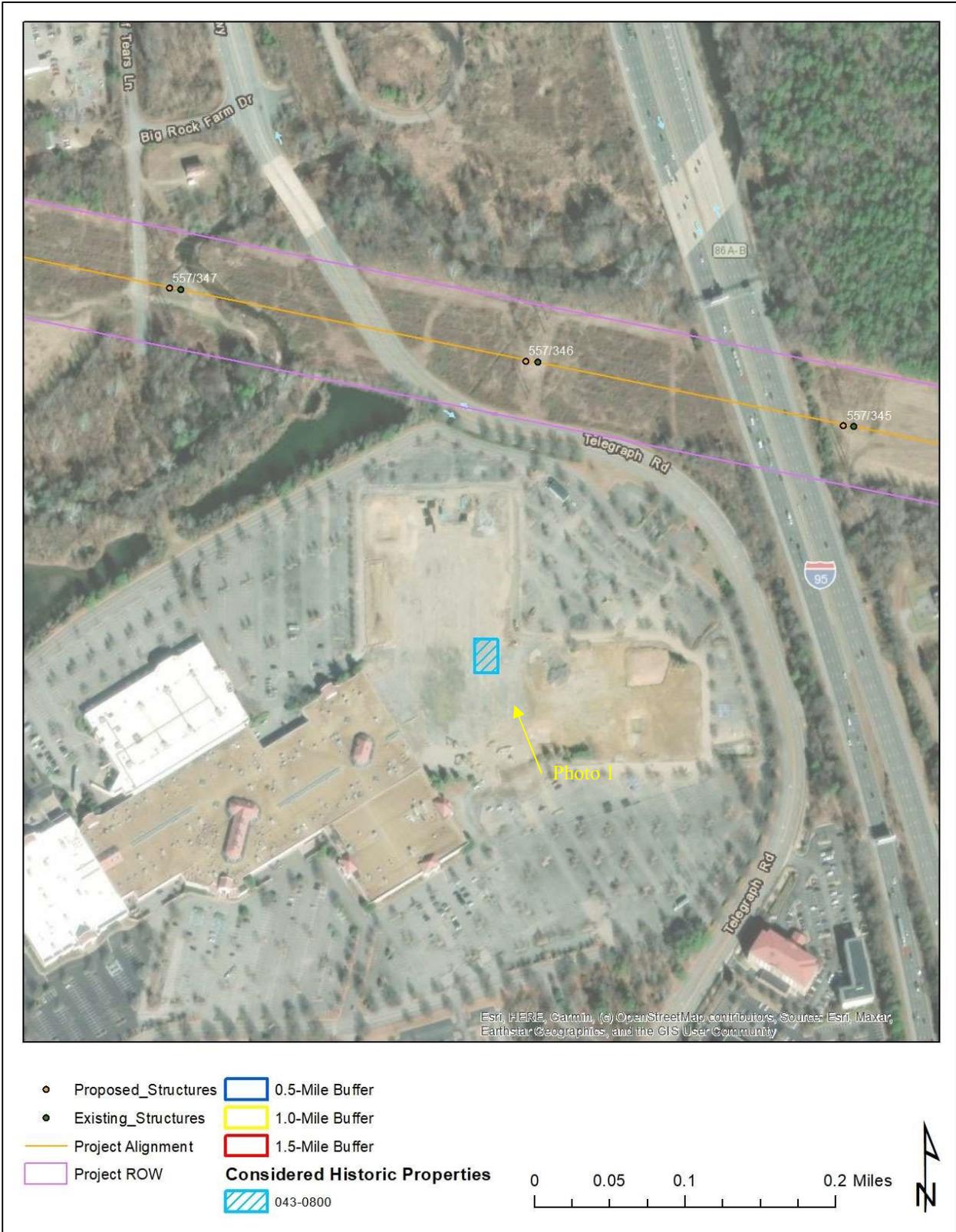


Figure 5-129: Antique Carousel in relation to the project alignment with locations and direction of representative photograph shown in yellow.



Figure 5-130: Photo location 1- View from Virginia Center Commons towards former Antique Carousel site, facing north.

VDHR# 043-5077
Glendale Battlefield

The Glendale Battlefield is located approximately 12 miles east of Richmond, bound by Darbytown Road to the north, Willis Church Road to the east, Malvern Hill Battlefield to the south, and Long Bridge Road to the west. The site, encompassing approximately 540 acres, contains interpretive markers, a cemetery, historic road beds, ruins, trenches and field fortifications, identified archaeological sites, and Brackett's Ford. Historically used as farmland, the land is currently characterized by a mix of successional-growth forest that obscures several historic road beds and light development including scattered twentieth century dwellings and a transmission line.

The battlefield is associated with the June 1862 Battle of Glendale, the fifth of the Seven Days' Battles. On June 30th, 1862, Huger's Longstreet's and Hill's divisions converged on the retreating Union army near Glendale. The Confederate army attempted to cut off the Union army from the James River but were unsuccessful. The night of the battle, McClellan established a strong position on Malvern Hill. Given its association with Civil War history, it has been determined 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 Glendale Battlefield occupies a large landscape spread throughout eastern Henrico County generally to the south and west of the project alignment. Only a small, discrete portion of the edge of the battlefield is located within one mile of the project while the rest of the battlefield is well further away. No portion of battlefield "core area" as delineated by the ABPP is located within one mile, and no portion of the battlefield is crossed by the project alignment. As such, there will be no direct impact to the battlefield as part of the project.

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.

The portion of the battlefield located within one mile of the project is generally focused on the confluence of White Oak Swamp and the Chickahominy River. Much of this portion of the battlefield is wooded and swampy, although the more elevated and dry areas are characterized by suburban residential development near the Elko crossing. The project alignment is roughly 0.48 mile away from the battlefield at the nearest point.

As such, inspection was conducted from public roads within the developed areas, while the undeveloped and wooded areas are not accessible to the public. Inspection from various vantage points throughout the battlefield located within one mile of the project found that the existing transmission line is not visible due to the intervening distance, vegetation, and development. From no vantage point within the portion of the battlefield located within one mile is any infrastructure associated with the project visible.

The existing transmission line structures within one mile of the battlefield currently range from 94 to 129 feet tall, and will be replaced with structures that will range from 122 to 158 feet tall,

resulting in an increase of 19 to 40 feet for individual structures (Table 5-18). 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 5-18: Existing and proposed heights of structures within one mile of the Glendale Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/236	108	137	29
557/237	118	143	25
557/238	114	153	40
557/239	128	147	19
557/240	128	153	25
557/241	123	147	24
557/242	108	137	29
557/243	94	122	28
557/244	126	152	26
557/245	129	158	29
557/246	129	157	28
557/247	127	152	25
557/248	123	152	29

Even with the increase in height proposed as part of the project, it is not anticipated that there will be any visibility of the replacement structures from the battlefield. The intervening distance, topography, vegetation, and development patterns will continue to screen all views of the transmission line from all vantage points within the battlefield.

As such, the project will not introduce any change in the setting or viewshed of or from the battlefield. 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 Glendale Battlefield per VDHR's impact characterization scale.

Figure 5-131 depicts the overall limits of the Glendale Battlefield in relation to the project alignment and viewshed buffers. Figure 5-132 provides a detail of the portion of the battlefield located within one mile of the project, with the location and direction of all representative photographs. Figure 5-133 and Figure 5-136 provide representative photographs from the battlefield towards the project.

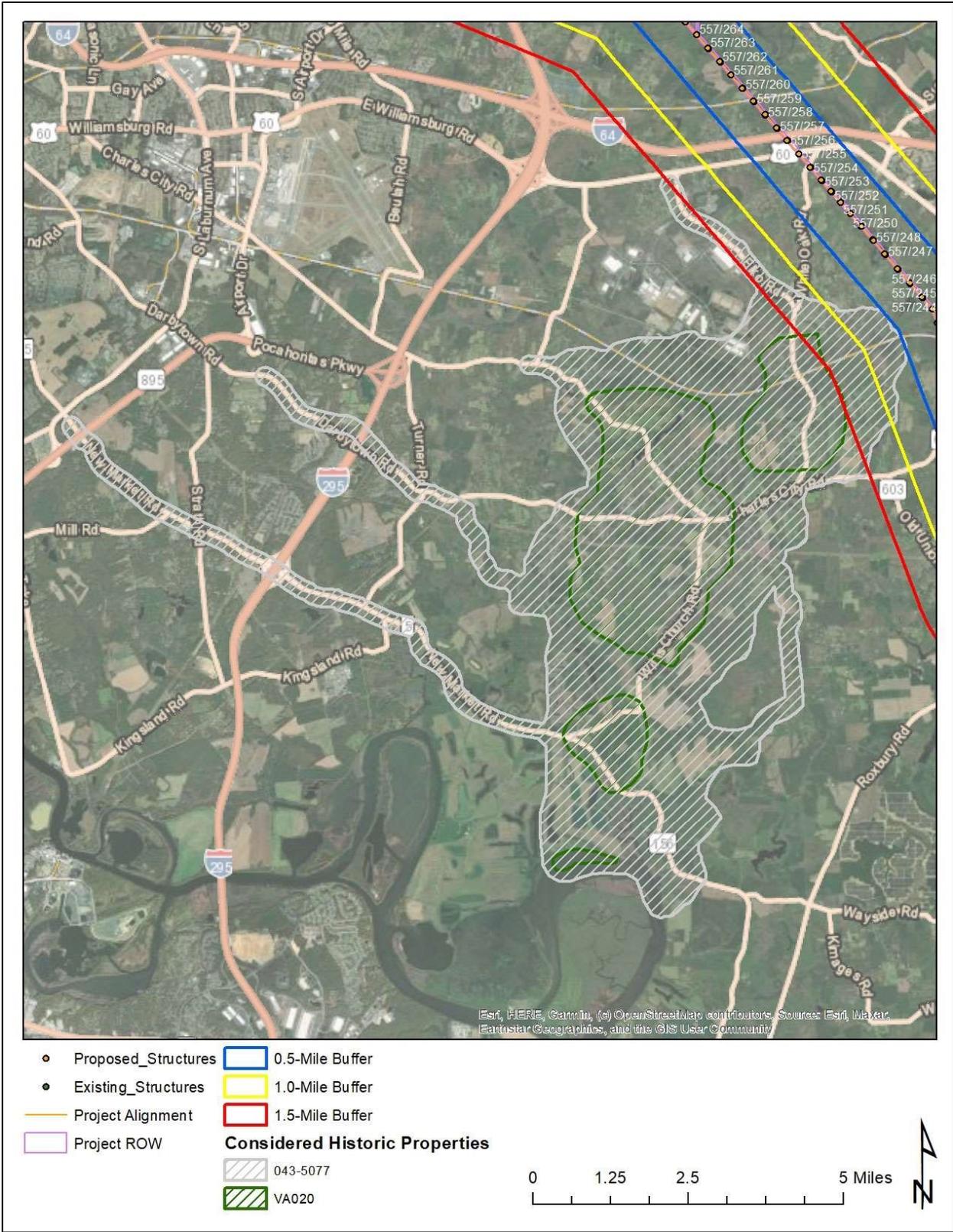


Figure 5-131: Overall limits of the Glendale Battlefield with ABPP tiers in relation to the project.

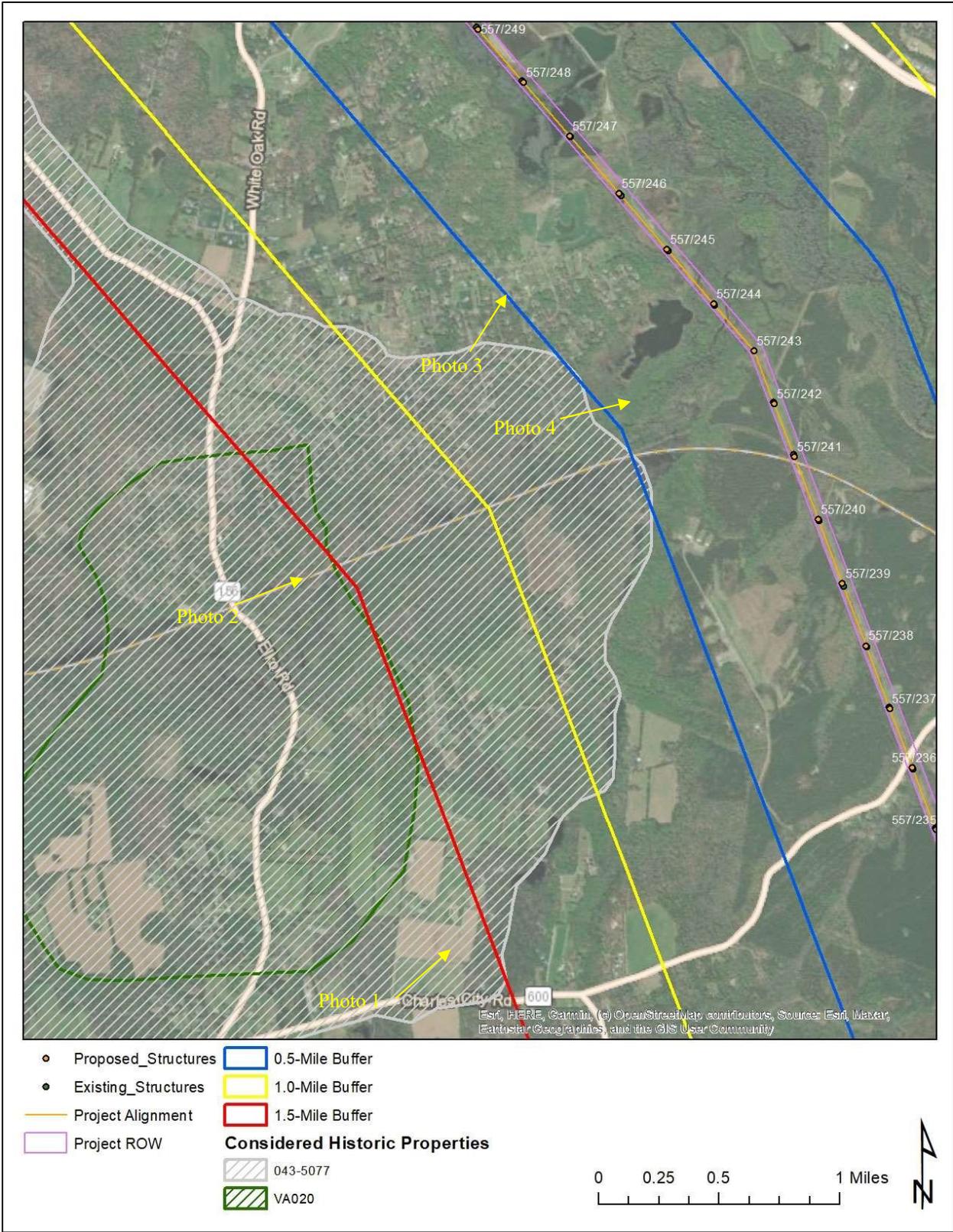


Figure 5-132: Glendale Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow.



Figure 5-133: Photo location 1- View from Hughes Road at Di's Way, facing north.



Figure 5-134: Photo location 2- View from C&O Railroad at Elko Road (core area), facing east.

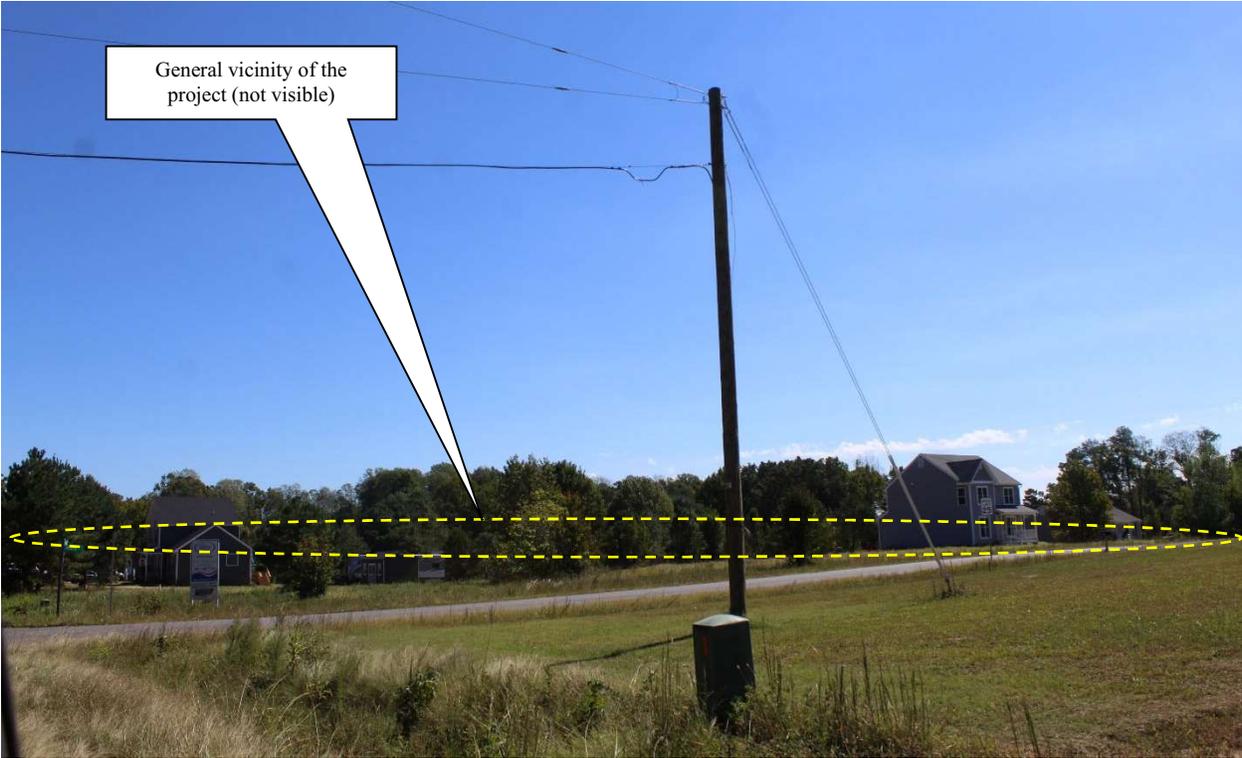


Figure 5-135: Photo location 3- View from Scandia Road, facing northeast.



Figure 5-136: Photo location 4- View from Scandia Lake Place, facing east.

VDHR# 043-5081

Fair Oaks/Seven Pines Battlefield

Fair Oaks/Seven Pines Battlefield encompasses areas of Hanover County, Henrico County, New Kent County, and the City of Richmond, Virginia. A small portion of the battlefield within Henrico County was subject to survey as part of this effort. This area is just north of North Airport Road and south of the Chickahominy River. The area is largely undeveloped north of the road, but to the southwest, the area is characterized by subdivisions of single-family homes and areas of commercial properties.

The Fair Oaks/Seven Pines Battlefield was fought over the course of two days during the Peninsula Campaign of 1862 and resulted in an inconclusive victory. A significant event during the battle, the wounding of Confederate General Joseph Johnston, resulted in General Robert E. Lee replacing Johnston as commander of the Confederate Army. Although much of the battlefield has been urbanized and subject to development, the Fair Oaks/Seven Pines Battlefield has been determined potentially eligible for listing in the NRHP by the VDHR.

As a *battlefield* located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Fair Oaks/Seven Pines Battlefield occupies a large landscape spread throughout eastern Henrico County generally to the south and west of the project alignment. While most of the battlefield is located beyond one mile from the project alignment, various portions, primarily including avenues of approach along roadways, and one portion of battlefield “core area” as delineated by the ABPP are located within one mile. A total of six structures to be replaced as part of the project are located within these portions of the battlefield, however, the boundaries in these area drawn broadly around the alignment of the historical roads. Additional structures to be replaced are located within one mile of these various portions of the battlefield.

The portions of the battlefield crossed by the project generally coincide with avenues of approach to and from the battle. In the case of the Fair Oaks/Seven Pines Battlefield, this includes three roads that cross the Chickahominy River from Hanover to Henrico County.

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.

The westernmost portion of the battlefield crossed by the project coincides present-day Cold Harbor Road with a loop around Market Road and crossing the project alignment again along present-day

Swamp Lane. The third, and easternmost portion of the battlefield crossed by the project is along present-day Williamsburg Road although it has been slightly re-aligned since the time of the battle.

Inspection from along Cold Harbor Road, revealed that the existing transmission line and multiple structures are visible up and down the ROW in both directions where it crosses the road, however, visibility beyond that is generally limited to the conductor as it is suspended across the road. There is an interpretive wayside and parking area for the Seven Days Battle along Cold Harbor Road, just south of the Chickahominy River, and from the parking lot, the existing transmission line and all structures are completely screened from view by thick woodland. A short walking trail leads through the woods to the river where one existing structure is visible across a broad swampy area. Although the boundaries of the battlefield widen further to the southwest, this portion of the battlefield is now occupied by the large I-295/Cold Harbor Road cloverleaf interchange. To the north of Chickahominy River, from along Cold Harbor Road and Market Road as it bends back towards the project alignment, views towards the project are generally screened and inhibited by the intervening topography and vegetation. Present-day Swamp Lane is a private road and therefore not accessible, however, it is lined by thick woods to both sides that likely screen any views of the existing transmission line other than where the ROW directly spans the road.

From along Williamsburg Road, the existing transmission line is generally screened from most locations other than where the alignment crosses what is now a length of White Oak Road due to thick vegetation in the area. There is also limited visibility of the top of one structure above the treeline from Williamsburg Road just east of the bridge over the Chickahominy River where the wider clearing allows this view.

The existing transmission line structures located within the battlefield crossed by the project currently range from 118 to 125 feet tall, and will be replaced with structures that will range from 147 to 154 feet tall, resulting in an increase of 24 to 29 feet for individual structures (Table 5-19). 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 5-19: Existing and proposed heights of structures within the Fair Oaks/Seven Pines Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
Williamsburg Road Area			
557/254	123	147	24
Swamp Lane Area			
557/267	122	152	29
557/268	118	142	24
Cold Harbor Road Area			
557/273	125	154	29
557/274	122	147	24
557/275	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, nor become visible

from any substantially new or different vantages than where the existing transmission line is already visible. There is not anticipated to be any visibility of the project from the core area of the battlefield. In most areas, it is not anticipated to rise above the treelines and the vegetation that currently screens the existing transmission line will continue to do so. The most visibility will be where the battlefield corridors coincide with modern roads that are crossed by the project and therefore there is already visibility of multiple structures up and down the ROW in both directions. In these areas, the new structures will be taller, but seen in conjunction with structures on an adjacent transmission line within the shared ROW that are not included in this project. The several existing structures that are visible from discrete vantage points within the battlefield beyond ROW crossings, including one from the Seven Days Battle interpretive area and one from the Williamsburg Road bridge will rise slightly taller above the treelines they are partially screened by, but it is not anticipated that any additional structures will become visible from these vantages. This was confirmed with photo simulation from multiple representative locations in the battlefield, including in the NPS land where it revealed there would be no additional visibility of structures beyond those that are already visible.

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. Other than ROW crossings, any visibility of the project will be limited to one structure, and only portions of those structures visible above intervening vegetation. 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 Fair Oaks/Seven Pines Battlefield per VDHR's impact characterization scale.

Figure 5-137 depicts the overall limits of Fair Oaks/Seven Pines Battlefield in relation to the project alignment and viewshed buffers. A detail of the portion of the battlefield within one mile of the project, with the location and direction of all representative photographs and photo simulations is provided in Figure 5-138. Figure 5-139 through Figure 5-149 provide representative photographs from the battlefield towards the project, as well as 3D renderings and photo simulations.

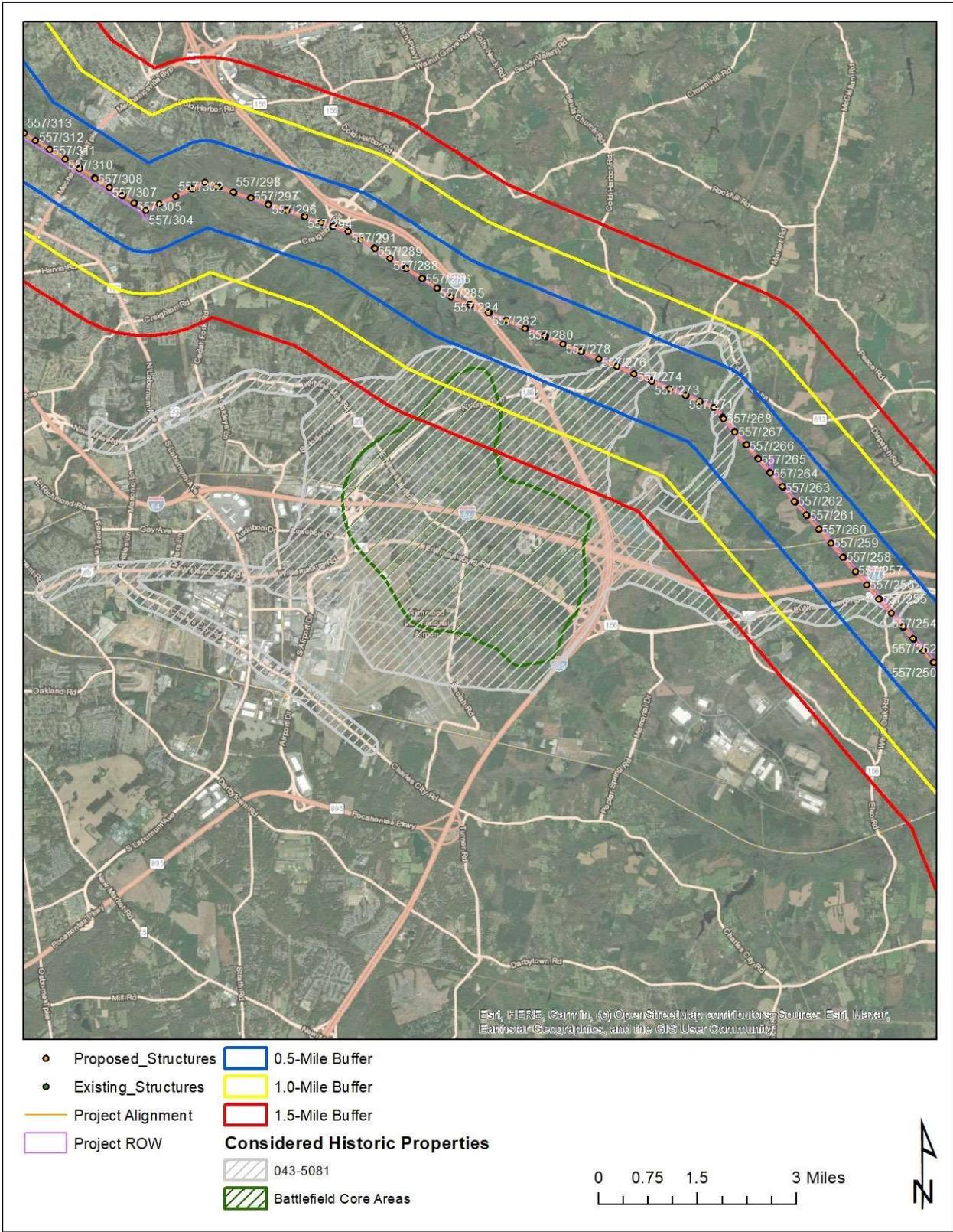


Figure 5-137: Overall limits of the Fair Oaks/Seven Pines Battlefield with ABPP tiers in relation to the project alignment and study tiers.

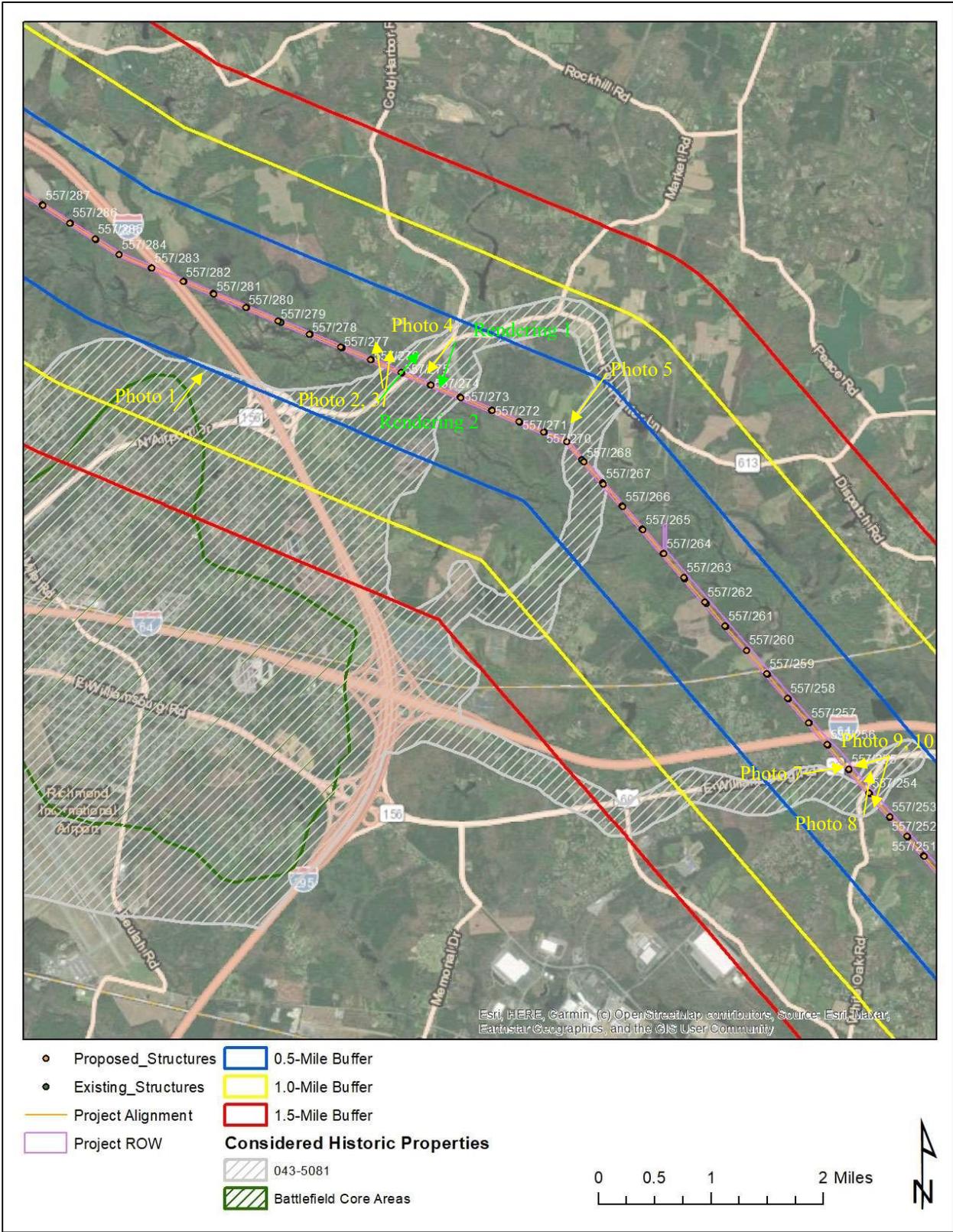


Figure 5-138: Detail of the Fair Oaks/Seven Pines Battlefield with locations and direction of representative photographs shown in yellow and photo simulation and renderings shown in green.



Figure 5-139: Photo location 1- View from Beverstone Road (core area), facing north.



Figure 5-140: Photo location 2- View from Seven Days Battle wayside, facing northwest.



Figure 5-141: Photo location 3- View from Seven Days Battle walking path, facing northwest.



Figure 5-142: Photo location 4- View from Cold Harbor Road at Market Road, facing southwest.



Figure 5-143: Photo location 5- View from Market Road, facing southwest.



Figure 5-144: Photo location 6- View from E Williamsburg Road west of Chickahominy River, facing east.



Figure 5-145: Photo location 7- View from White Oak Road south of E Williamsburg Road, facing northeast.



Figure 5-146: Photo location 8- View from E Williamsburg Road at Chickahominy Bridge, facing southwest



Figure 5-147: Photo location 9- View from E Williamsburg Road at Chickahominy Bridge, facing west

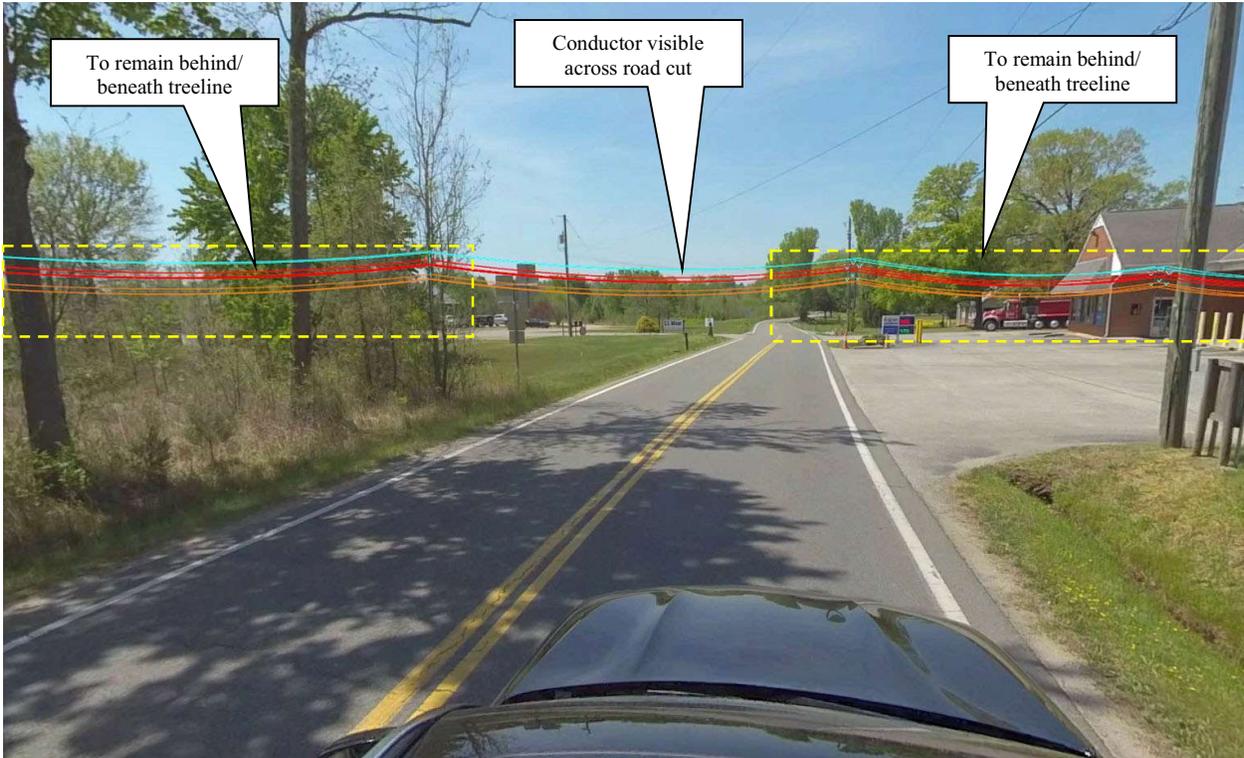


Figure 5-148: Rendering 1 - model of proposed structures and transmission line from Cold Harbor Road at Market Road (structures to remain beneath treeline by short lengths of conductor may be visible above trees). Source: Google Streetview

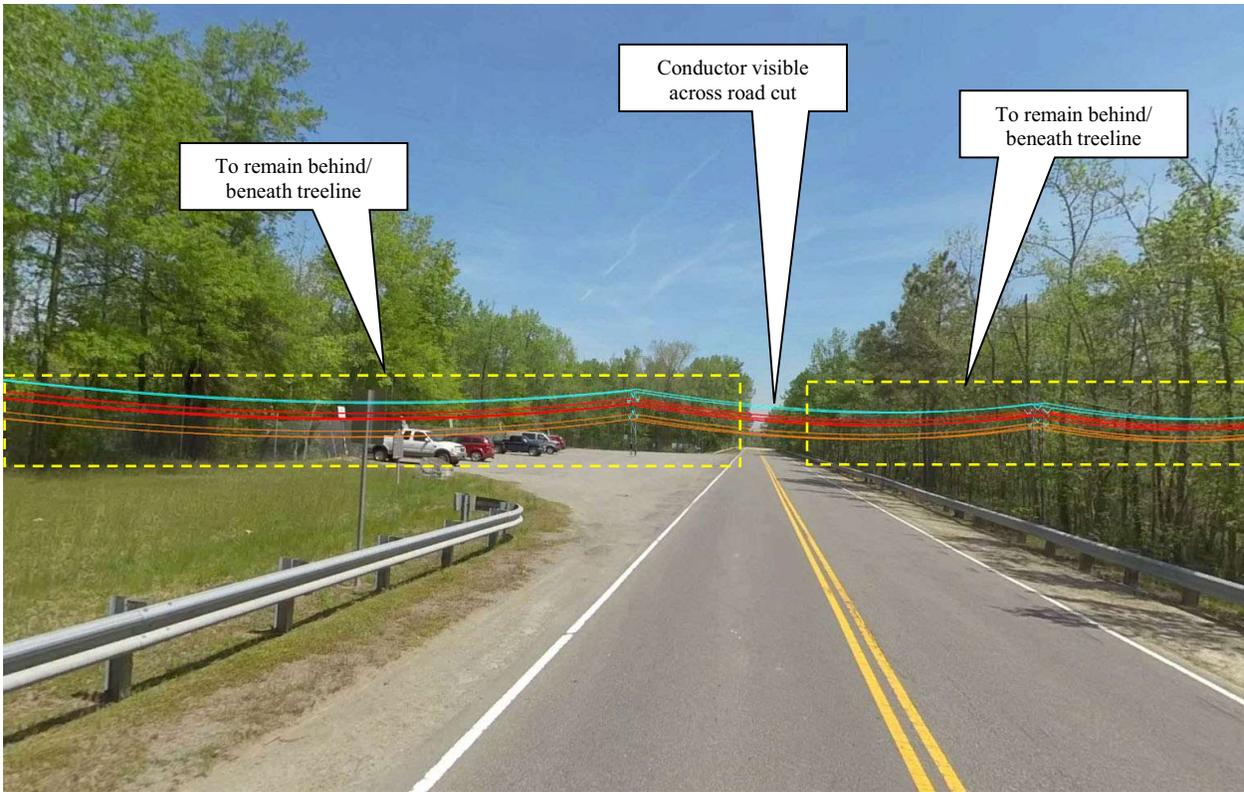


Figure 5-149: Rendering 2 - model of proposed structures and transmission line from Cold Harbor Road at Seven Pines Battle wayside (structures to remain beneath treeline by short lengths of conductor may be visible above trees). Source: Google Streetview

VDHR# 043-5108
Yellow Tavern Battlefield

The Yellow Tavern Battlefield is located in Henrico County, Virginia along the Brook Road/US-1 corridor spanning both sides of the present-day intersection with Interstate 295. Its defining features include the Yellow Tavern, Hanover Court House Road, Louisa Court House Road junction, Brooke Turnpike/Telegraph Road, rail breastworks, Brook Bridge, and Strawberry Hill. The area has experienced heavy twentieth-century development with a mix commercial, industrial, and residential areas, however, which has negatively affected the battlefield's viewsheds and setting.

The battlefield is associated with the Battle at Yellow Tavern, which was part of the McClellan's Overland Campaign. As the Battle of Spotsylvania Court House raged in May 1864, Union cavalry troops under Major General Philip Sheridan embarked on a raid of Richmond. They met and defeated Confederate cavalry troops at Yellow Tavern, and it was during this battle that Confederate Major General J.E.B. was mortally wounded. Although its setting has been compromised by extensive modern development, the site is treated as potentially eligible for listing in the NRHP under Criterion A for its association with Civil War history.

As a *battlefield* located within the study tiers around the project alignment, an assessment of potential impacts was conducted. Yellow Tavern Battlefield occupies a large landscape spread throughout eastern Henrico County generally to the south and west of the project alignment although much of the battlefield, including battlefield "core area" as delineated by the ABPP are located within one mile. A total of four structures to be replaced as part of the project are located within these portions of the battlefield, and an additional thirteen structures to be replaced are located within one mile of these various portions of the battlefield. The portions of the battlefield crossed by the project are generally along Brook Road (US-1) north of present-day I-295.

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.

The portion of the battlefield located within one mile of the project, including the core area, has all been subject to extensive development that has severely diminished the integrity of setting. The landscape is almost completely characterized by suburban residential and commercial development in addition to recent industrial uses and a data center campus. The I-295/US-1 cloverleaf interchange occupies a large portion of the battlefield core area.

Inspection from throughout the portions of the battlefield within one mile revealed that the dense development patterns, coupled with treelines and other vegetation generally inhibit views of the existing transmission line from most vantages not in immediate proximity to the ROW. The line is most visible from where the ROW crosses roads throughout the limits of the battlefield, including US-1 and I-95, as well as a handful of secondary and tertiary streets through residential areas and a new data center complex.

The existing transmission line structures located within the battlefield crossed by the project currently range from 92 to 114 feet tall, and will be replaced with structures that will range from 122 to 144 feet tall, resulting in an increase of 29 to 34 feet for individual structures (Table 5-20). 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 one angle structure to be replaced with a 3-pole structure.

Table 5-20: Existing and proposed heights of structures within one mile of the Yellow Tavern Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/346	114	143	29
557/347	110	144	34
557/348	92	122	30
557/349	112	142	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, nor become visible from any substantially new or different vantages than where the existing transmission line is already visible. In most areas, the existing line is screened behind development and intervening vegetation, and due to the density of development in the area, it is not anticipated that the new structures will be visible above the treelines. The most visibility will be where the project alignment crosses public roads and therefore there is already visibility of multiple structures up and down the ROW in both directions. In these areas, the new structures will be taller, but seen in conjunction with two sets of other structures on adjacent transmission lines within the shared ROW that are not included in this project. This was confirmed with photo simulation and 3D model renderings from select representative vantage points.

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. Other than ROW crossings, any visibility of the project will be limited to one structure, and only portions of those structures visible above intervening vegetation. 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 Yellow Tavern Battlefield per VDHR's impact characterization scale.

Figure 5-150 depicts the overall limits of Yellow Tavern Battlefield in relation to the project alignment and viewshed buffers. A detail of the portion of the battlefield within one mile of the

project, with the location and direction of all representative photographs and photo simulations is provided in Figure 5-151. Figure 5-152 through Figure 5-159 provide representative photographs from the battlefield towards the project, as well as 3D renderings and photo simulations.

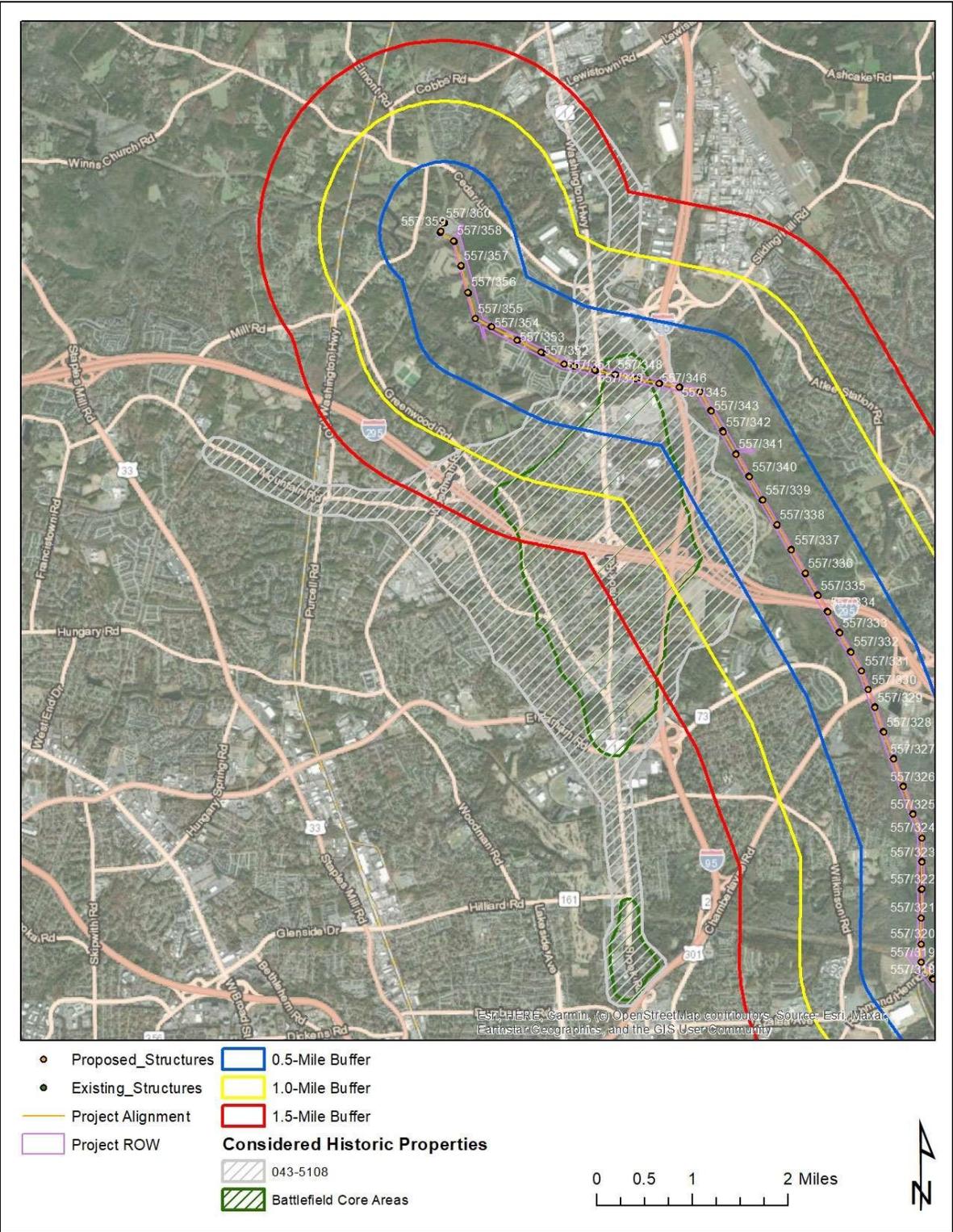


Figure 5-150: Overall limits of the Yellow Tavern Battlefield with ABPP tiers in relation to the project alignment and study tiers.

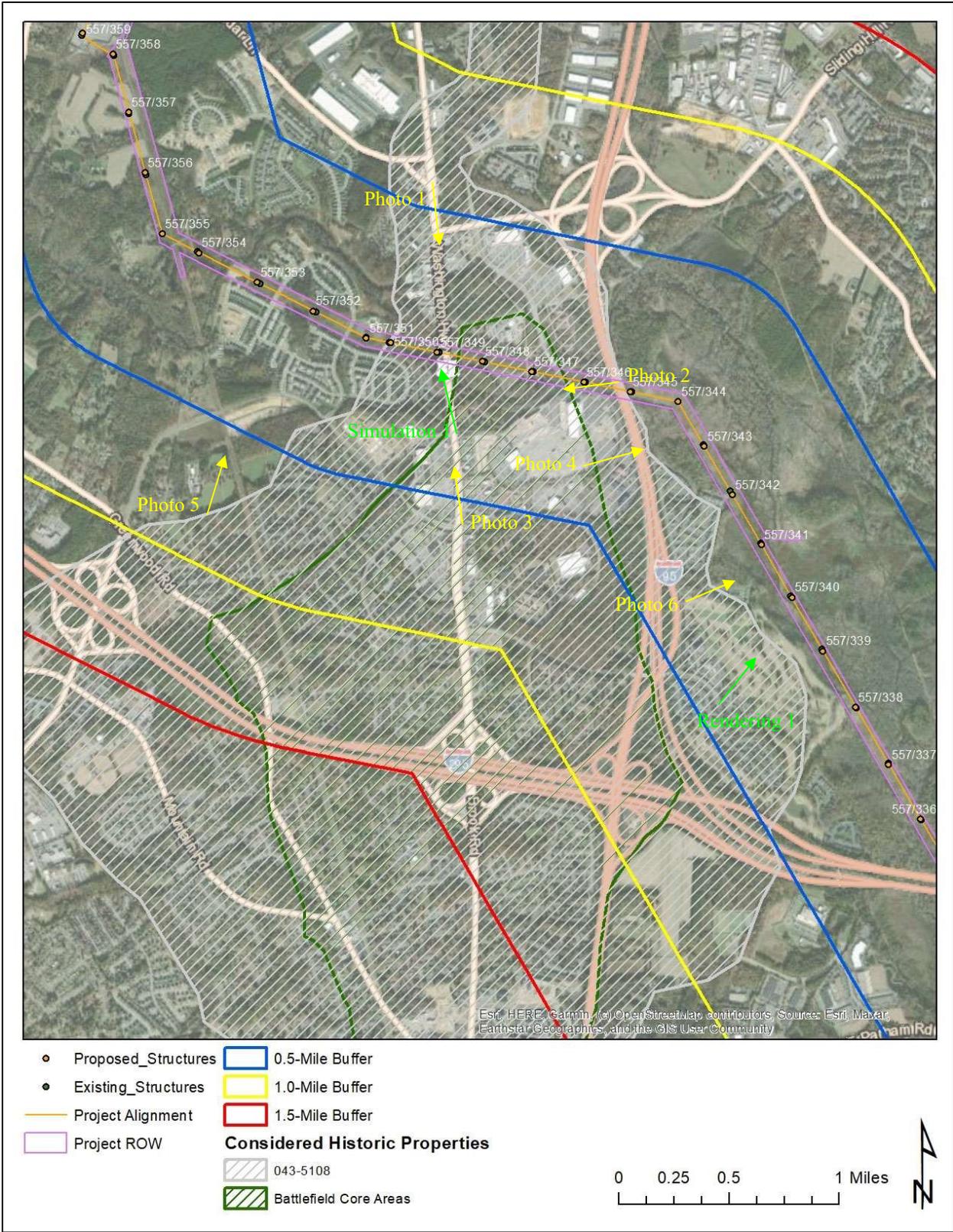


Figure 5-151: Detail of the Yellow Tavern Battlefield with locations and direction of representative photographs shown in yellow and photo simulation and renderings shown in green.



Figure 5-152: Photo location 1- View from Brook Road (US-1), facing south.



Figure 5-153: Photo location 2- View from I-95 at project ROW crossing, facing west.



Figure 5-154: Photo location 3- View from Brrok Road (US-1) at JEB Stuart Parkway, facing north.



Figure 5-155: Photo location 4- View from Cold Harbor Road at Market Road, facing southwest.

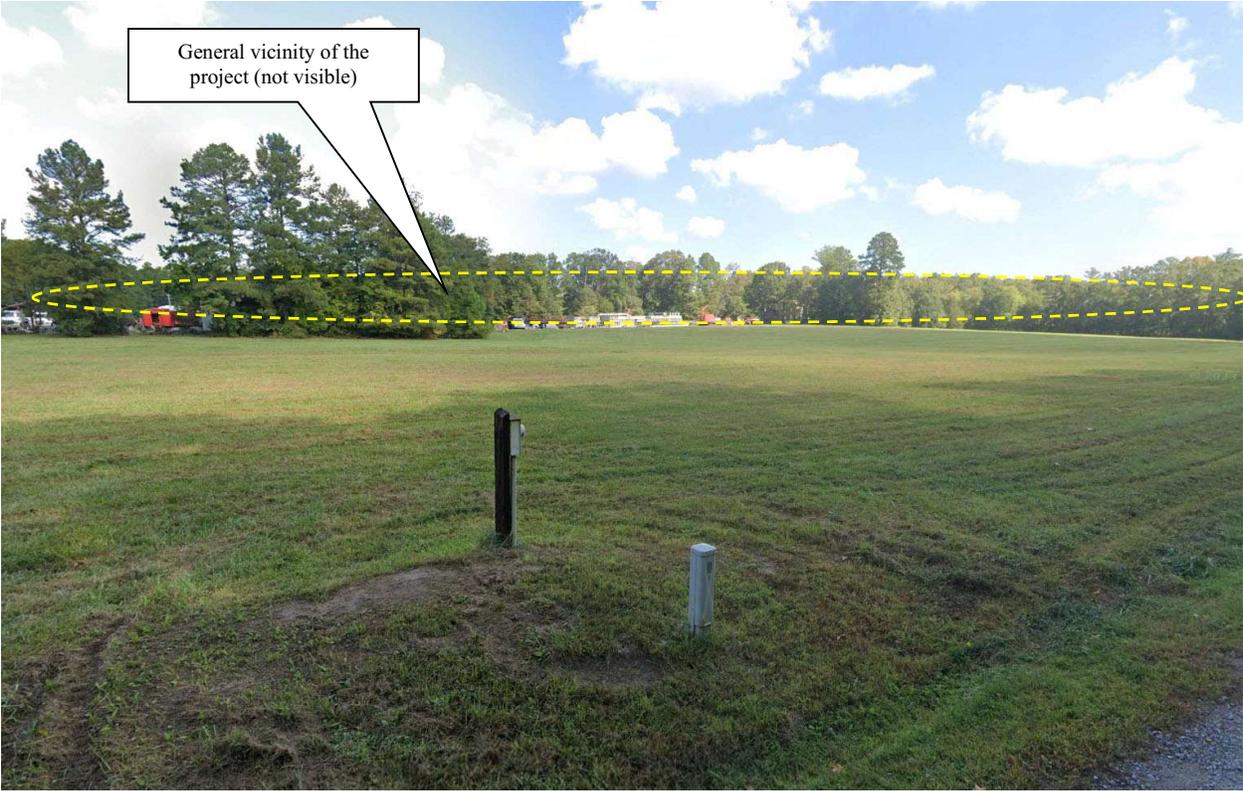


Figure 5-156: Photo location 5- View from Winfrey Road, facing northeast



Figure 5-157: Photo location 6- View from Village Views Parkway, facing east.



Figure 5-158: Photo Simulation 1 – Existing (above) and proposed (below) view from Brook Road (US-1), facing north. All structures shown in yellow to remain screened behind vegetation. Short length of conductor may be visible as it is suspended across road.

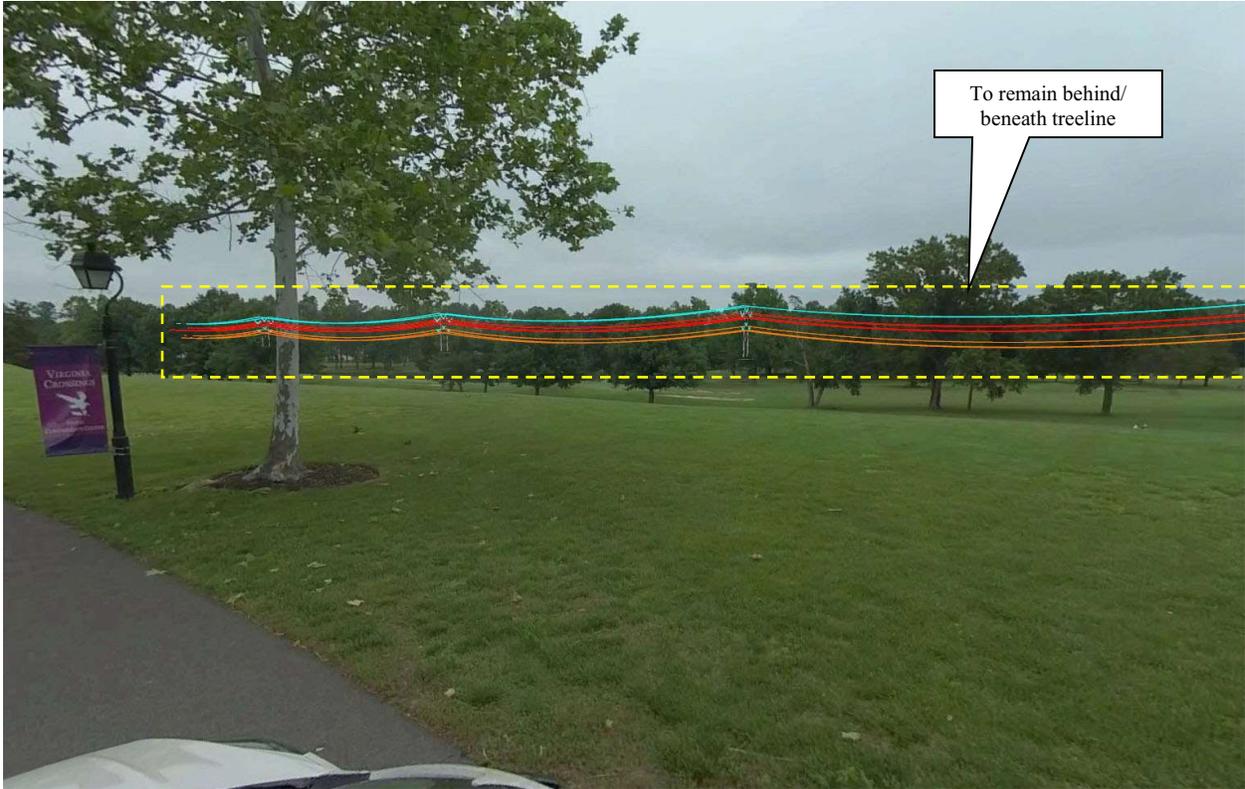


Figure 5-159: Rendering 1 - model of proposed structures and transmission line Virginia Crossings Parkway and Golf Course (all project components to remain beneath treeline). Source: Google Streetview

VDHR# 043-5273
Battle of Garnett's and Golding's Farm

The Garnett's and Golding's Farm Battlefield occupies roughly 4,700 acres across Henrico and Hanover counties in Virginia. It lies within the Atlantic Coastal Plain, with elevations ranging from approximately 25 feet to 120 above main sea level. The landscape features a combination of wooded and wetland areas, crossed by several transportation corridors including Airport Drive, East Nine Mile Road, and South Holly Avenue. Interstate 295 runs along part of its northeast boundary and Interstate 64 comprises most of its south boundary. The area has experienced heavy development, mostly of modern housing subdivisions with some commercial and industrial development in the southern part of the battlefield and a golf course occupying the northern portion. These developments have negatively impacted much of the historic character and viewsheds of the battlefield. Parts of the battlefield, mainly in its northernmost quarter, maintain their rural character, however.

The Battle of Garnett's and Golding's Farm took place on June 28, 1862 and was part of McClellan's Peninsula Campaign. The day after the third of the Seven Days' Battles at Gaines Mill, McClellan's Army of the Potomac retreated southwestward towards White Oak Swamp. Confederate commanders learned of the Union forces' movements and staged an assault against McClellan's southern front at James M. Garnett's and Simon Gouldin's (a.k.a. Golding) farms. The Confederate army was easily repulsed and suffered roughly 430 casualties, but the attack instilled in Union commanders the fear that an attack south of the James River was imminent. For its association with Civil War history, DHR previously determined the site to be potentially eligible for listing in the NRHP.

As a *battlefield* located within the study tiers around the project alignment, an assessment of potential impacts was conducted. The Garnett's and Golding's Farm Battlefield occupies a large landscape spread throughout eastern Henrico County generally to the south and west of the project alignment. A length of the northern edge of the battlefield, including a portion of battlefield "core area" as delineated by the ABPP is located within one mile of the project while the rest of the battlefield is well further away. As no portion of the battlefield is crossed by the project alignment there will be no direct impact to the battlefield as part of the project.

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.

The portion of the battlefield located within one mile of the project is generally focused on the south side of the Chickahominy River near the present-day intersection of Airport Road and Nine Mile Road. Nearly all of this portion of the battlefield is now characterized by suburban residential development while the areas closest to the project are wooded and swampy. The project alignment is roughly 0.06 mile away from the battlefield at the nearest point.

As such, inspection was conducted from public roads within the developed areas, while the undeveloped and wooded areas are not accessible to the public. Most public roads and areas

accessible for inspection are located further than one mile away, while developed properties within one mile tend to be private. Inspection from most vantage points throughout the battlefield located within one mile of the project found that the existing transmission line is not visible due to the intervening distance, vegetation, and development. The only views of existing structures to be replaced as part of the project are from Interstate-295 where it crosses the Chickahominy River just north of the nearest edge of the battlefield limits.

The existing transmission line structures within one mile of the battlefield currently range from 102 to 146 feet tall, and will be replaced with structures that will range from 127 to 165 feet tall, resulting in an increase of 19 to 33 feet for individual structures (Table 5-21). 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 5-21: Existing and proposed heights of structures within one mile of the Garnett’s and Golding’s Farm Battlefield.

Existing Structure Number	Existing Pole Height	Proposed Pole Height	Height Difference
557/275	124	153	29
557/276	124	148	24
557/277	126	155	29
557/278	130	154	24
557/279	132	156	24
557/280	130	154	24
557/281	127	156	29
557/282	146	165	19
557/283	146	165	19
557/284	126	140	14
557/285	109	142	33
557/286	133	152	19
557/287	126	149	23
557/288	122	147	25
557/289	118	147	28
557/290	108	137	29
557/291	105	129	24
557/292	102	127	25
557/293	102	127	24
557/294	120	149	29

Even with the increase in height proposed as part of the project, it is not anticipated that there will be any visibility of the replacement structures from the vast majority of the battlefield where the existing transmission is currently screened. The intervening distance, topography, vegetation, and development patterns will continue to screen all views of the transmission line from most vantage points within the battlefield, including all of the core area. The only expected visibility will be of an existing structure that is visible from Interstate-295 just north as it crosses the Chickahominy River, just along the northern edge of the battlefield limits.

As such, the project will not introduce any substantial change in the setting or viewshed of or from the battlefield. It will remain screened from the vast majority of the battlefield, including all core areas, most of which have been subject to dense development that has already compromised the setting of the area. 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 Garnett's and Golding's Farm Battlefield per VDHR's impact characterization scale.

Figure 5-160 depicts the overall limits of the Garnett's and Golding's Farm Battlefield in relation to the project alignment and viewshed buffers with the location and direction of all representative photographs. Figure 5-161 and Figure 5-168 provide representative photographs from the battlefield towards the project.

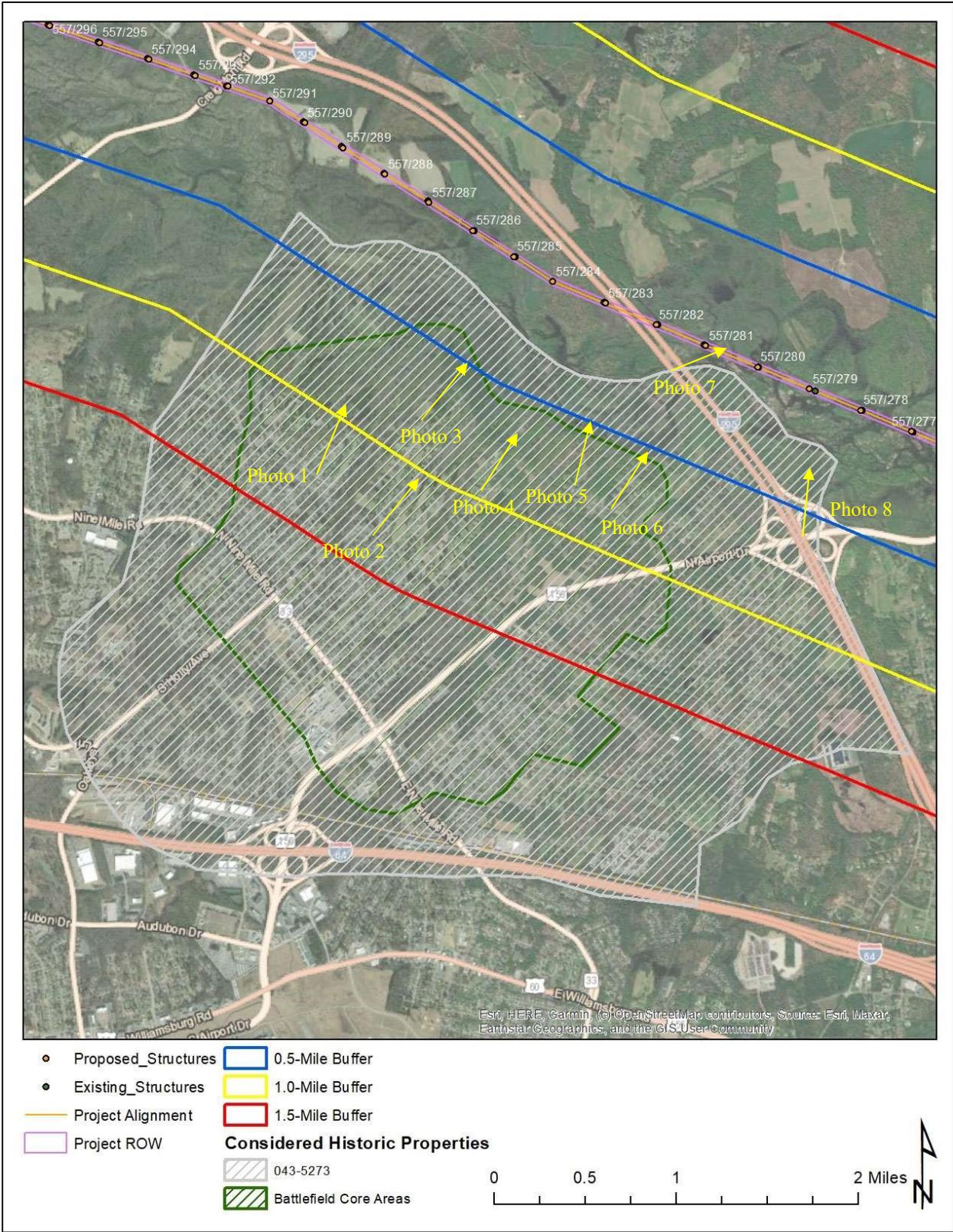


Figure 5-160: Garnett's and Golding's Farm Battlefield with ABPP tiers in relation to the project alignment with locations and direction of representative photographs shown in yellow.