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**US Army Corps of
Engineers
Norfolk District
Regulatory Office
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September 16, 2016

Colonel Jason E. Kelly
Commander
U.S. Army Corps of Engineers, Norfolk District
803 Front Street
Norfolk, VA 23510-1096

Re: Response to National Park Service's March 25, 2016, and July 5, 2016 Letters Re:
*Proposed Dominion Virginia Power Surry-Skiffes Creek-Whealton Transmission Line
Project - Corps Permit Application NAO-2012-00080 / 13-V0408 (James River) James
City County, Virginia*

Dear Colonel Kelly:

Dominion Virginia Power ("Dominion") is pleased to provide this response to the National Park Service's ("NPS") March 25, 2016, letter ("NPS March Letter") and its July 5, 2016, letter ("NPS July Letter") to the U.S. Army Corps of Engineers ("Corps"). The NPS March Letter provides NPS' additional comments regarding the visual effects analysis contained in the Cultural Resources Effects Assessment (Sept. 15, 2015) ("CREA"). Therein, NPS sets out an introduction, and then provides what it labels general and specific comments regarding the CREA. The NPS July Letter briefly repeats some of NPS' comments regarding the visual effects analysis in the NPS March Letter, and focuses comments on the cumulative effects analysis related to the visual effects analysis.

Dominion is providing this response to address issues raised in the NPS March Letter and to demonstrate that while the NPS disagrees with the CREA report, it provides no information demonstrating that the report is incorrect or incomplete. Dominion also responds to the issues raised in the NPS July Letter. Because there is some overlap in the two NPS letters, we note when a response to one letter addresses the same or similar comment in the other letter.

Response to the Introduction of the NPS March Letter

In the introduction, NPS states that the analysis in the CREA “does not meet NPS standards.” NPS March Letter at 1. NPS, however, does not identify what those standards might be. NPS does make reference to a “Best Practices Guide” later in the letter, but does not provide a full citation to this guide. *Id.* at 2. We assume it is referring to the NPS *Guide to Evaluating Visual Impact Assessments for Renewable Energy Projects Natural Resource Report* NPS/ARD/NRR—2014/836 (Aug. 2014) (“NPS Guide”). Even if that is the guide to which NPS is referring, NPS does not suggest the CREA is inconsistent with it. Instead, NPS quotes language from the guide that even the highest quality simulations can have use limitations. In any event, as Dominion explained on pages 8-10 in its November 13, 2015, Comments on NPS’ Analysis of Visual Impacts to Historic Properties (“November Comments”), the CREA is consistent with the NPS Guide. Importantly, as also set out in that the November Comments, the visual impacts analysis provided by NPS is not consistent with the NPS Guide. In addition, as set forth in Dominion’s Photo Simulation Overview (April 7, 2016, revised June 7, 2016 and August 12, 2016), the photos and simulations prepared by Truescape that are referenced in the CREA (Appendix D), as well as additional Truescape photos and simulation provided to the Corps in May 2016, also are consistent with the NPS Guide.¹ In fact, Truescape was a contributing member of Argonne National Laboratory’s review of the NPS Guide. Testimony of Edward Twiss before the Virginia State Corporation Commission at 10-11 (Mar. 14, 2013). Finally, based on this information and its own field observations, the Corps recently confirmed the accuracy and sufficiency of the photos and simulations Dominion has provided. Email from R. Steffey, Corps, to State Historic Preservation Office (“SHPO”), Advisory Council on Historic Preservation (“ACHP”), and Consulting Parties (June 20, 2016) (“Corps Email”).²

NPS informs the Corps that it has retained the assistance of its visual impacts experts from its Air Resources Division and from the Argonne National Laboratory to provide expert advice and guidance. NPS March Letter at 1. In neither the NPS March Letter nor the NPS July Letter, however, does NPS offer any expert analysis, advice, or guidance provided by the Air Resources Division or the Argonne National Laboratory.

Response to the General Comments about the CREA in the NPS March Letter

In its general comments, NPS asserts that the CREA lacks a description of the “landscape character overall and from each viewpoint,” and suggests that additional language is needed to detail the view from each viewpoint in order to establish a baseline for the effects analysis. *Id.* While NPS may have prepared the CREA differently,³ NPS’ criticism is unfounded. For each historic property assessed, the CREA provides a written description of the site and its surroundings, including its view shed, a line of sight analysis overlaid on a map showing the landscape, and photographs depicting views from the properties (showing where the transmission line would be).

¹ While the NPS Guide may be useful in assessing visual effects, there is no legal authority for NPS’ suggestion that the Corps’ assessment of visual effects must “meet NPS standards” or otherwise be consistent with its guidance.

² As discussed herein, Dominion’s provision of additional Truescape photos and photo simulations, and the Corps’ review thereof, confirms and supports the visual effects analysis and conclusions in the CREA. Therefore, contrary to NPS’ assertion, NPS July Letter at 1, additional analysis is not necessary for the Corps to understand the visual effects of the Project.

³ NPS prepared its own visual impacts analysis, that does not include the descriptions or detail NPS believes the CREA is lacking.

For example, after providing a description of the Bourne-Turner House, a discussion of its National Register status and aspects of its integrity, and orientating the property vis-à-vis the proposed transmission line, CREA §§ 3.1.1 to 3.1.3, the CREA provides the following regarding the property's setting and the landscape around it.

The house is located down a long gravel driveway and sits on a level 45.65-acre parcel (Isle of Wight Online Tax Assessment Records). Immediately surrounding the dwelling are a number of mature trees which shield the residence from the road. Beyond the immediate area surrounding the dwelling are open fenced-in pastures. To the rear of the property, on the opposite side of open farm field is a tree line approximately 400 feet in depth. To the northwest of the resource, shielding the view of the proposed transmission line, is an area of dense woods of approximately 1,500 feet deep.

Id. § 3.1.4. As noted, following this written description is the line of sight analysis and photos to provide the reader with a full description and understanding of the historic property and the baseline of the landscape character around and viewable from it. From this information, one can easily discern the “landform, land cover, land use and structures visible” from the historic property, as NPS desires.⁴ For the Bourne-Turner House, one can see that the area is flat and nearly surrounded by tall tree stands and was, and is to some extent, being used as farm. In addition to the farmland and trees, there are pasture fences, a barn, and related farm equipment, as well as nearby houses. Views from the property toward the river are obscured by the large, dense tree stand, and thus, so are any on-river or shoreline structures. The evaluation of the Bourne-Turner House in the CREA is representative of how all of the historic properties are evaluated in the document. Moreover, the CREA, of course, was not created, and does not reside, in a vacuum; the record before the Corps is replete with information regarding the landscape character overall (*i.e.*, within the Area of Potential Effects (“APE”)), and the adversely affected historic properties. For example, the Truescape photos and simulations provide existing views, and simulated views with the completed Project, of the landscape from within (and even from outside) the APE and from many historic properties, as well as from within the river looking up and down river, and shoreward. The record from the Virginia State Corporation Commission (“SCC”) proceedings also contains numerous reports as well as testimony regarding the character of the landscape.

NPS claims that an analysis of how the Project components contrast with the existing landscape is missing. NPS March Letter at 1. Contrary to this assertion, the CREA provides a full description of the Project and its components, along with maps showing locations of those components. CREA § 1.2. Appendix C to the CREA provides information on and diagrams of what the Project components will look like from various angles, their size, and what they are made of (and thus, their color).⁵ Appendix D provides Truescape simulations of the transmission line towers from certain historic properties to demonstrate the visual contrast, and also provides photos of the nearby existing transmission line crossing at the James River Bridge to demonstrate

⁴ Thus, contrary to NPS’ statement, the photos in the effects sections for each property are informative to the analysis and conclusions. NPS March Letter at 1.

⁵ Similar information also is available in numerous places on the Corps’ Project website. *See, e.g.*, the Project Impact Drawings, the James River Crossing Profile, and the View Shed Simulations.

the accuracy of the simulations.⁶ Using all of this information, as well as the line of sight analyses and photos, the CREA provides a coherent explanation of its effects (and no effects) conclusions.⁷ Both the Corps and the SHPO agreed.

NPS states that additional photos and simulations from key observation points (“KOPs”) associated with the Captain John Smith Chesapeake National Historic Trail (“CAJO Trail”) are needed. NPS March Letter at 2. While Dominion believes that the CREA’s evaluation of the CAJO Trail as a contributing element of the Eligible Historic District thoroughly analyzes potential effects from the Project, Dominion, in response, provided the Corps additional Truescape-generated photos and simulations from within the Eligible Historic District and CAJO Trail. Photo Simulation Overview (April 7, 2016, revised June 7, 2016 and Aug. 12, 2016). As NPS requests, these provide “upstream and downstream simulations from close proximity to the proposed crossing,” and from other locations in the APE, as well as in-river photos of the shoreline. These photos and simulations support the conclusions set forth in the CREA.

Finally, NPS requests a description of the simulation development process. *Id.* Dominion provided that information in its Photo Simulation Overview (April 7, 2016, revised June 7, 2016 and Aug. 12, 2016). While NPS suggests that the usefulness of simulations can be limited, as per its NPS Guide, as the Photo Simulation Overview makes clear, Truescape has developed and implemented a process that produces a product that provides as near as true-to-in person views as possible. A comparison of the James River Bridge photos generated by Truescape to actual views of that area confirms as much. And, as noted above, the Corps found that all of the Truescape photos and simulations are accurate and sufficient for its analysis. Corps Email.

Response to Specific Comments about the CREA in the NPS March Letter

Section 2.2

NPS asserts that the Visual Effects Assessment Methodology does not say anything about how effects were determined. NPS March Letter at 2. Section 2.2 is merely one part of the overall Methodology set forth in Section 2. As set forth in Sections 2.0 and 2.1, consistent with the National Historic Preservation Act Section 106 implementing regulations (36 C.F.R. part 800), the CREA evaluated potential visual effects based on the ability of the effect to diminish properties’ aspects of integrity, with due consideration being giving to the National Register criteria that are important for each particular property. The CREA made adverse effects recommendations when it determined that aspects of integrity that remained intact were diminished by a visual effect.

In Section 2.2, the CREA states that the APE is not pristine due to the numerous modern intrusions within it (noting, *e.g.*, Kingsmill Resort, the BASF chemical plant, and the Ghost Fleet). NPS states that “[w]hat is relevant is what is visible from the potentially affected resources, not the visual qualities of the APE as a whole.” NPS March Letter at 2. This contradicts other NPS statements. On page one of its letter, NPS asserts that the CREA must

⁶ Dominion recently reviewed the James River Bridge photos and provided to the Corps on May 9, 2016, revised photos with corrected transmission line tower heights.

⁷ These conclusions are supported further by the in-river photos and simulations Dominion provided to the Corps in May 2016. *See* Corps Email.

address and consider landscape issues. Moreover, in numerous other letters and statements to the Corps, NPS has asserted that the Corps must take a landscape approach (or at least make sure it considers the landscape as a whole). Notwithstanding the contradiction, the CREA's individual evaluations of each historic property in fact consider what is visible from the potentially affected resource, as just the comment requests. By looking at the larger APE, the CREA has incorporated landscape issues into its consideration. Moreover, as discussed in Section 5 of the CREA, the state of the APE and larger landscape is relevant to the evaluation of cumulative effects.⁸

NPS states that the exact heights used for the CREA digital line-of-sight analysis should be provided, as well as information regarding the accuracy of the digital surface model ("DSM"). *Id.* at 3. As set forth in the CREA, the DSM used was created using the Esri ArcGIS product suite⁹ and data from the LiDAR database at virginalidar.com. The digital line of sight analyses were performed using a standard 6' offset for the observer height. The ground height as well as the resulting observer height (ground + 6) are coded into the point locations that were used for the analysis. The metadata accompanying the LiDAR dataset states:

The vertical accuracy of the LiDAR was tested by Dewberry with 105 independent survey checkpoints. The survey checkpoints were evenly distributed throughout the project area and were located in areas of either urban or open terrain. All checkpoints were used to compute the Fundamental Vertical Accuracy (FVA). Project specifications required a FVA of 1.20 ft (36.2 cm) based on a RMSEz (0.60 ft/18.5 cm) x 1.9600. All checkpoints were used to compute the Consolidated Vertical Accuracy (CVA). Project specifications required a CVA of 1.20 ft (36.2 cm) based on the 95th percentile. Lidar dataset tested 0.73 ft vertical accuracy at 95% confidence level in all land cover categories combined (urban and open terrain).

With a 95% confidence level for vertical accuracy of the LiDAR data, it is reasonable to assert that the DSM created utilizing Esri ArcGIS and the LiDAR dataset would also be rated at 95% confidence for accuracy. The CREA's use of Esri software and LiDAR data should satisfy NPS given that NPS used them for its own visual effects analysis regarding this Project.¹⁰

Section 3.9 (Carter's Grove)

NPS suggests that additional descriptions of the visual setting would be "helpful." NPS March Letter at 3. As discussed above, the CREA provides ample information to establish a baseline and assess effects. NPS also seeks additional information about what the proposed towers would look like from the Carter's Grove property. In addition to the photos provided showing where towers would be located in reference to the existing topography and tree cover, from numerous places on the property, simulations are provided in Appendix D.1 that show "what the structures

⁸ Dominion's in-river photos and simulations support the CREA's conclusions about the nature and extent of development within the APE, as well as provide additional information showing what is visible on the shoreline from historic properties.

⁹ This product is a recognized as reliable in the field of visual effects analysis.

¹⁰ NPS, Analysis of Visual Impacts to Historic Properties at 5 (Sept. 15, 2015).

would look like in the existing setting, how prominent they are, [and] how the contrast with the existing surroundings, etc.,” which is what NPS seeks. *Id.*

NPS takes issue with the CREA’s discussion of the potential effects on the property from the Skiffes Creek Switching Station and Skiffes Creek to Whealton 230 kV segments of the Project. Specifically, NPS states that there is no indication that a line-of-sight analysis was performed, and thus, there is no way to evaluate the accuracy of the assessment. *Id.* That is incorrect. The CREA states: “Line-of-sight analysis conducted from two points within the boundary of the resource indicates that there would be no visibility of the Switching Station or 230 kV segment (Figure 37).” CREA at 3.61, 3.63. In addition, as the CREA states and depicts, while the house at Carter’s Grove itself is set back down a long driveway within the property through dense woods, access to the property is along a road across from residences and a convenience store. This part of the property is approximately 3,000 feet from the proposed Skiffes Creek Switching Station and an existing 230 kV transmission line ROW corridor. To provide information about potential views from this part of the property, even though it is not part of the property associated with its historical significance, photographs were taken from the end of the driveway where it meets the road where access to the property is obtained toward where the above noted Project segments would be (behind the residence, the 7-11, and large tree stand). *See* Figure 41; Figure 38 provides the location from which the photo in Figure 41 was taken and Arrow 1b shows the direction the photographer was facing. As the CREA states, the “location of the property and the dense stands of trees present along the boundaries of the parcels effectively shield the property from indirect visual effects associated with these two segments. The tree heights along the parcel boundaries in some places exceed 120 feet.” Thus, NPS’ statement that these photos are not helpful is incorrect.¹¹

NPS states that “an expert witness” at the SCC hearing found that there would be three towers visible from this property and that the Truescape simulations and the CREA line-of-sight analysis showed only two towers visible. From this, NPS posits that “[i]f the expert witness is correct, then both the Truescape simulations and [the CREA’s] analysis are apparently wrong.” NPS March Letter at 3.¹² The inverse, of course, would also be true. NPS does not explain why it believes the witness is correct and Truescape and the CREA are wrong other than to make the conclusory statement that the witness used a tethered balloon method and that such a method is “more definitive.” *Id.* It also is conceivable that both approaches are “correct” and within their own margins of error simply produced different outcomes. Dominion notes that these issues were the subject of a significant amount of debate and testimony before the SCC, and, while the SCC did not resolve this specific issue, it, like the CREA, concluded that the Project would adversely affect Carter’s Grove.

¹¹ NPS also suggests that the photo in Figure 40 is not relevant because Figure 38 Arrow 1a shows that the picture was taken from within the property from the driveway, and not directly toward where the proposed switching station and transmission line would be located. NPS March Letter at 3. This is incorrect. This photo provides the viewer and evaluator additional perspective regarding the dense tree line along the east, north-east boarder of the property that, in addition to the obstructions on the other side of the road, further obscure any possibility for these project segments to be seen from the property.

¹² NPS does not state the name of the witness to which it refers or provide any citation to the SCC record regarding this testimony. Dominion believes that NPS is referring to the testimony of Curt Westergard, who testified on behalf of James City County.

In any event, even assuming NPS was correct, NPS has not indicated how this would materially change the analysis or the conclusion in the CREA, which as noted, concluded that the Project would adversely affect Carter's Grove. Beyond this, however, it should be noted that NPS is referring to the number of towers that might be seen from the main house at Carter's Grove. Consistent with the NPS Guide, the CREA also evaluated the potential impacts on this property from the most sensitive KOP (*i.e.*, the KOP with the greatest potential exposure to the Project), which is along the shoreline at the property. CREA at 3.63 (Figure 37, right-hand figure). This analysis showed that nearly all of the towers in the river crossing would be visible from this KOP. *Id.* at 3.61. In addition, the CREA also evaluated views from a number of other locations on the property and found that varying numbers of towers (including zero) are visible from different places on the property. *Id.* at 3.61 to 3.62. From all of this information, the CREA concluded that Carter's Grove would be adversely affected. Both the Corps and SHPO concurred on this point. Presumably, NPS also agrees. The CREA's analysis, which involved multiple KOPs, including the most sensitive, demonstrates that whether two or three towers are visible from one point on the property would result in no change to the analysis or conclusion in the CREA, and NPS has not shown otherwise.

Following its conclusory statement that the tethered balloon method is more definitive, NPS asserts that because the CREA did not use that method casts doubts on the accuracy of its conclusions. NPS March Letter at 3. That is a *non-sequitur*. Even assuming the tethered balloon method is more definitive than other methods, it does not follow that other methods (and thus, the conclusions based thereon) are not accurate; the tethered balloon method's definitiveness has no bearing the accuracy of other methods. Here, the record establishes that the Truescape method is very accurate and sufficient for the Corps' analysis. *See, e.g.*, Corps Email; Photo Simulation Overview (April 7, 2016, revised June 7, 2016 and Aug. 12, 2016).

Section 3.33.1.4 (Colonial Parkway)

NPS faults the CREA for describing the potential view of the transmission line as "distant" from the Colonial Parkway, claiming that at approximately 3.5 miles that line likely would be "very noticeable at times." NPS March Letter at 3 (asserting that using such a term "seems to minimize the impacts but without any justification or meaningful logic."). Dominion does not disagree that the line might be noticeable at times. The CREA's line-of-sight analyses for two KOPs along Colonial Parkway show that most of the river crossing portion of the line would technically be visible. The CREA's use of the term distant was done after evaluating the consultant's in-person views and photographs of the area and reviewing Truescape simulations of the view from the property and comparing those with photos of the existing James River Bridge from similar distances. The CREA is trying to describe what it believes the line would look like from a distance, and fairly uses the phrase "distant and faded." The additional Truescape photos and simulations Dominion provided on May 9, 2016, support the CREA's description. *See* Corps Email. Thus, the use of that term was not meant to suggest that the line could not be noticed, but instead was meant to describe what the line would look like to someone that did notice it. Perhaps most importantly, in NPS' own visual impacts analysis, it states that items at 3.5 miles would be in the background/at the horizon.¹³ Likewise, the analysis NPS

¹³ NPS, Analysis of Visual Impacts to Historic Properties at 6-7 (Table 1), 8-9 (Table 2 (using 2-4 miles as background)), 11-12 (Table 5 (using 2-4 miles as background)), 12-13 (Table 6 (using 2-4 miles as background)), 14-15 (Table 8 (using 2-3.5 miles as background and 3.5 miles as the start of the horizon)), 15-16 (Table 9 (using 2-

performed for the Susquehanna to Roseland transmission line project used 3.5 miles for the starting point of the horizon.¹⁴ Thus, the CREA's use of the term distant is consistent with NPS' conclusions regarding the distances at which the background/horizon is found.

NPS also attempts to fault the CREA for comparing its in-person views, photographs, and Truescape simulations with the photos of the James River Bridge in Figures 13 and 14 of Appendix D.5 (showing the bridge from 3.5 miles away). NPS March Letter at 4. Specifically, NPS claims the resolution is low and the pictures are small, and that the photos look to be taken on the day when air quality was "relatively poor" and that there likely are days with better air quality that would make the line more visible. *Id.* NPS provides no basis for this opinion, and in any event is incorrect. The weather conditions on the day the photographs were taken (September 1, 2015)¹⁵ were mild and would be considered average for the time of year in Williamsburg, Virginia. The photographs were taken between the hours of 9AM and 12PM. According to archived weather data (<http://williamsburgva.alerteagle.com/history2015-jpg.aspx>), the average temperature between the hours of 9AM and 12PM was 85 degrees with an average humidity of 76% and wind speeds of approximately 5 mph. No rain was forecasted and cloud cover was average. The photos were taken with a 16.1 megapixel Nikon Coolpix 35mm digital camera.¹⁶ Beyond those facts, an objective look at the photos to anyone familiar with the James River area would recognize them as very representative of a generally clear day on the river. The photos show a great deal of clear blue sky with only light fluffy clouds. The shimmers on the water demonstrate the sun was shining. When taken together, the photos in Appendix D regarding the James River Bridge area show a day with typical air quality, and thus, are acceptable to use in the analysis, contrary to NPS' statements. Further, when compared with the revised and additional Truescape photos of the James River Bridge area, it is clear the photos in Appendix D are accurate and realistic. Finally, as noted, the Corps has evaluated the Truescape photos and simulations, including against its own field observations, and found them accurate. Corps Email.

NPS next claims that the CREA misreads FAA Guidance regarding the visibility of the safety lighting required on the towers. NPS claims that L-864 lighting, which is the lighting the FAA requires for transmission lines, also is typically used on wind turbines and that NPS has found that it is visible from distances over 30 miles when used on wind turbines. NPS March Letter at 4. As such, NPS claims that the CREA's statement that L-864 lighting may be visible up to 3.1 miles is in error. NPS also claims that witnesses before the SCC said that the lighting on the towers would have to be "strobe" lighting, thereby making it more visible. *Id.* While Dominion cannot speak to what NPS claims it has found in the field related to wind turbines (and NPS has offered no evidence other than its conclusory statement in its letter), according to FAA Advisory

4 miles as background)) & Figure 3 (using 2-3.5 miles as background and 3.5 miles as the start of the horizon) (Sept. 15, 2015).

¹⁴ See NPS, *A Methodology for the Assessment and Analysis of the Resource Impacts Occurring within a 14-Mile Wide Viewshed of the National Park Service Units*, at 3.

¹⁵ CREA at 3.219.

¹⁶ It is noteworthy that, consistent with the CREA, when NPS wanted to take representative photos of a typical day when evaluating the Susquehanna to Roseland transmission line project, it used a digital camera with a 27mm focal length. See, e.g., NPS, *Susquehanna to Roseland 500kV Transmission Line Right-of-Way and Special Use Permit Final Environmental Impact Statement* at Ch. 4, pp. 591-92 (Aug. 2012).

Circular 70/7460-1L (“Circular”),¹⁷ L-864 lights are medium-intensity lights that flash between 20-40 flashes per minute, and thus, are not strobe lights. Circular, App. A, Table A-1. At a medium-intensity, Appendix B of the Circular provides that the distance such a light could be seen is 3.1 miles, under 1 and 3 statute miles meteorological visibilities at night. *Id.* App. B, Table B-1. Certainly, there may be times when meteorological conditions permit greater visibility at night. Taking into account the forgoing, the CREA concludes that the red blinking lights would be visible, consistent with NPS’ position. CREA § 3.33.1.4. The CREA concludes, however, that given the numerous existing lights already in the viewshed, any impact on the Colonial Parkway would be minimal. *Id.* That conclusion is supported by the fact that the lighting at a distance, in the existing environment, would not adversely affect or detract from the primary characteristics qualifying the Colonial Parkway for listing on the National Register (the parkway is eligible under Criterion A and C: Criterion A for its association with the early twentieth-century trends of recreation and conservation and as an intact example of an early twentieth-century recreational parkway; Criterion C for landscape architecture as an intact example of parkway design and for its architectural features).

Section 3.33.2.4 (Jamestown Island)

Similar to its comment above regarding the CREA’s use of the term “distant,” NPS takes issue with the CREA’s use of the term “very distant” when describing the view of the proposed line from Jamestown Island. NPS March Letter at 4 (claiming the CREA is “misleading”). As above, Dominion does not disagree with NPS that certain structures are likely to be “noticeable at times.” *Id.* The CREA’s line-of-sight analysis for Black Point at Jamestown Island shows that the some of the Project’s towers or portions thereof would be visible. The CREA’s use of the term very distant was done after evaluating the consultant’s in-person views and photographs of the area and reviewing Truescape simulations of the view from the property and comparing those with photos of the existing James River Bridge from similar distances. The CREA is trying to describe what it believes the line would look like from a distance, and takes into consideration, that unlike the potential views for Colonial Parkway, the vantage point from Black Point involves views of the bend in the river and Hog Island, as well as the background behind where the two visible towers would be. As such, the CREA’s use of the term “very distant” to describe the potential view in one place is fair and not misleading, particularly when the CREA uses the same term “distant and faded” as it used elsewhere to describe the potential view. As above, the additional Truescape photos and simulations Dominion provided on May 9, 2016, support the CREA’s description. *See* Corps Email. Thus, the use of that term was not meant to suggest that the transmission line could not be noticed, but instead was meant to describe what the line would look like to someone that did notice it. We also refer the reader to the discussion above in the section about the Colonial Parkway regarding NPS’ conclusions regarding where the background and horizon begin in its visual impact analysis for this Project and at the Susquehanna Roseland project.

NPS also makes the same comments about lighting as it did regarding the Colonial Parkway. NPS March Letter at 4. As such, we refer the reader to our response above regarding lighting.

Section 3.35.4 (Eligible Historic District/CAJO Trail)

¹⁷ This Circular was issued in December 2015, and updated the FAA Circular 70/7460-1K that is referenced in the CREA. The updated Circular does not change any of the lighting requirements at issue in NPS’ comments. Circular at i-ii.

NPS argues that the CREA's reliance on the photos of the existing James River Bridge to simulate how the transmission line would appear is in error because it claims that the photos under represent the visual contrasts, were taken on a day of poor air quality, are low-resolution, and that the towers on the James River Bridge are smaller than the towers for the Project. NPS also seeks additional in-river photos and simulations, including showing what the towers would look like by an up-close in-river viewer. NPS March Letter at 4-5. NPS also makes the same lighting comments, the response to which is noted above. NPS March Letter at 6.

As discussed above, while Dominion believes that the CREA's evaluation of the Eligible Historic District/CAJO Trail thoroughly analyzes potential effects from the Project, Dominion, in response, on May 9, 2016, provided the Corps additional Truescape-generated photos and simulations from within the Eligible Historic District and CAJO Trail. These photos and simulations support the conclusions set forth in the CREA, and more than meet the consulting parties' requests. The Corps also has found these, and the other photos and simulations Dominion provided to be accurate and sufficient for its analysis, including regarding the Eligible Historic District and CAJO Trail. Corps Email.

We have responded above to most of NPS' criticisms regarding the James River Bridge photos above. Nevertheless, we note again these photos were taken on a representative day and are realistic and accurate. The Corps agrees with the Truescape photographs and simulations. Corps Email. Regarding tower heights, NPS is mistaken. As set forth on the revised James River Bridge photos (with heights added) that Dominion provided to the Corps on May 9, 2016, there are eleven towers that are 163.7 feet tall, and there are five towers that are 290 feet tall. By contrast, Table 1 in the CREA (at page 1.4) shows that only two Project towers (the two spanning the navigational channel) are 297 feet, and two others are 277 feet. These four towers are comparable to the five James River Bridge line five towers at 290 feet. The majority of the rest of the Project towers are under 163.7 feet, the height of the rest of the James River Bridge line towers. Thus, the James River Bridge line towers likely are more visible than the Project's towers will be, and thus, it represent an appropriate, conservatively point of comparison and simulation. This is confirmed by the recent in-river photos of the James River Bridge and transmission line. Corps Email (confirming the accuracy and sufficiency of these photos and simulations).

Response to the Introductory and General Comments in the NPS July Letter

In the introduction to the NPS July Letter, before discussing cumulative impacts, NPS cites its NPS March Letter as evidence that the visual analysis in CREA is deficient and/or lacking. NPS July Letter at 1. As discussed above, NPS' criticisms of the analysis in the CREA are unfounded. In addition, NPS, and other parties, have sought additional information regarding visual impacts, including from within the James River. *Id.* at 1, 9. As discussed above, Dominion provided additional photos and simulations, including from within the James River (and thus, throughout the CAJO Trail and Historic District). The Corps found this information accurate and realistic. *Supra* note 7. Importantly, the additional photos and simulations support the conclusions in the CREA regarding direct, indirect, and cumulative effects. Finally, NPS states that additional information regarding the severity of impacts is needed. *Id.* While Dominion believes that the CREA provides the requisite severity assessment, it nevertheless provides the Surry-Skiffes Creek-Wheaton 500 kV Project White Paper Regarding Severity of Impacts on Historic Properties (Aug. 31, 2016) ("White Paper") in Attachment 1 to address this

issue directly, as well as to respond to NPS' January 28, 2016, letter to the Corps, which set out NPS' opinion regarding the severity of impacts of the Project for some of the historic properties at issue. As the White Paper demonstrates, the severity of impacts from the Project on the historic properties at issue is discussed and assessed in the record, and the conclusions related thereto well supported in the record.

Regarding cumulative effects, NPS cites to letters from the ACHP and SHPO stating that the Corps' cumulative effects analysis to date has not been adequate, at the time those letters were drafted. NPS July Letter at 1-2. Yet, the ACHP's and SHPO's letters contain only general, high-level comments, and do not provide any basis, let alone indication, as to why the cumulative effects analysis was inadequate.¹⁸ At most, SHPO said in November 2015 that it believed that an overhead powerline would alter the character of a largely undeveloped area, solidify its status as an industrial/commercial corridor, and open the door to subsequent development. Dominion addressed those issues in its Response to Comments Submitted by Consulting Parties Concerning the Surry-Skiffes Creek-Whealton Project at 30-37 (Dec. 18, 2015) ("December Response").¹⁹ As discussed therein, as well as in the White Paper, reasonable minds can differ about the nature and severity of the visual effects from the Project.

In turn, reasonable minds also can differ about the current character of the area where the Project will be located, and the level of development and modernity therein. As set out in the CREA, and as was the subject of discussion and debate before the SCC, however, the record reflects that from every historic property, shore-based KOP, in-river location, and the land-based area within the APE, development and modernity is visible and has impacted the area, as well as the historic properties. CREA § 5.2.2; White Paper at 3-4 (citing SCC Order that this area of the James River has mixed progress with history, but has done so successfully); December Response at 33. The CREA's cumulative effects analysis is not deficient because it recognizes these facts. It would be deficient if it did not. Cumulative effects analysis must look at the effects of past actions, as well as reasonably foreseeable future actions.²⁰

Reasonable minds also can differ regarding speculation related to unknown and currently unknowable potential future effects related to industrial corridors or subsequent development. Neither SHPO nor any other party has provided any evidence or information regarding potential future industrial or commercial projects seeking to cross the James River near the Project's proposed crossing so as to create some type of industrial/commercial corridor. Likewise, neither SHPO nor any other party has provided any evidence or information about subsequent development in or nearby the APE being induced by the Project, either due to its provision of electricity or as precedent. As discussed in the December Response (at 30), the Project is not a new highway or highway interchange that is certain to bring traffic to, or foster and spurn new growth in, the area, or otherwise obviously be growth inducing. To the contrary, the purpose of the Project is to provide the ability to maintain a reliable source of electricity for an entire region, consistent with legal requirements, based on current and future projected needs. Just as the

¹⁸ As the Corps has stated, general objections do not aid its decision-making process: specificity is necessary. Letter from Col. J.E. Kelly, Corps, to C. Vaughn, ACHP, at 6-7 (Apr. 5, 2016) ("Corps April Letter").

¹⁹ The December Response also addressed the only other specific, non-general objections to the cumulative effects analysis.

²⁰ CEQ, Guidance on the Consideration of Past Actions in Cumulative Effects Impacts Analysis (2005) ("CEQ 2005"); *see also* Daniel R. Mandelker, *NEPA Law and Litigation* § 10:42.05 (2013 ed.) (citing CEQ 2015) ("Mandelker"). Professor Mandelker is one of the nation's foremost experts on NEPA.

Corps is not required to evaluate the effects of projects that are not reasonably foreseeable in its cumulative effects analysis, December Response at 31, 33-35, the Corps is not required to include speculation regarding growth-inducing cumulative effects. Mandelker §§ 10:41, 10:42.20 (citing *Fla. Keys Citizens Coal., Inc. v. U.S. Army Corps of Engr's*, 374 F. Supp. 2d. 1116, 1147 (S.D. Fla. 2005)).

Finally, NPS makes reference to a February 18, 2016, meeting with the Corps at which NPS claims that the Corps stated that a “more robust analysis of cumulative effects” was needed. NPS July Letter at 1. Dominion was not at that meeting, and thus, cannot comment substantively on that issue. Dominion notes only that the Corps did not request additional cumulative effects analysis from Dominion. Instead, the Corps asked for additional photos, simulations, and information that might inform that issue, as well as the Corps’ overall assessment of effects. As discussed above, Dominion timely provided that information. After the Corps’ receipt and evaluation of this additional information, as NPS notes, the Corps determined the evaluations of cumulative effects, among other things, were sufficient. *Id.* at 2 (citing Corps Email). Thus, the Corps did not dismiss or ignore comments provided by NPS, SHPO, and ACHP, as NPS suggests. *Id.* at 2. Instead, the Corps acted on those comments to obtain additional information, reviewed that information against the current analysis in the record, and found it sufficient under the circumstances.

Response to the Cumulative Effects Analysis Comments in the NPS July Letter

In setting the stage for its provision of a “supplemental analysis of the [P]roject’s cumulative effects to historic properties,” NPS begins by stating that certain historic properties at issue (*e.g.*, Jamestown) have “tremendous and iconic historic significance on their own,” and that their collection in the area makes them even more significant. *Id.* NPS also states its prior conclusion that all impacts from the Project on historic properties are “major.” *Id.*²¹

The Corps repeatedly has recognized the historic importance of the historic properties at issue. Nevertheless, the perceived historic significance or iconic nature of an area or historic property does not dictate how it must be evaluated under Section 106 of the National Historic Preservation Act (“NHPA”). Rather, the regulations establish a singular approach to evaluate properties that qualify as historic properties.²² As the record makes clear, the Corps has followed that process here, and the SHPO has concurred with its decisions. *See, e.g.*, Corps April Letter at 3-7. We note this point here because, although not stated explicitly, the insinuation in the NPS July Letter (and other NPS and consulting party letters) is that because, in its view, some of the historic properties at issue are of such great importance, any effect upon them must be considered “major,” or significant. *See, e.g.*, NPS July Letter at 4-5. There is, however, no support for that approach in the NHPA § 106 regulations. Instead, the regulations provide the criteria against which effects on historic properties must be evaluated to determine whether the effect is adverse. 36 C.F.R. § 800.5(a)(1) (“An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of

²¹ As discussed in the White Paper, those conclusions are unfounded and not supported by the record.

²² The only types of properties that are treated somewhat differently are National Historic Landmarks. 36 C.F.R. § 800.10. Nevertheless, Section 800.10 requires the Corps to evaluate and resolve direct effects on National Historic Landmarks using the same process as other historic properties. *Id.*

the property's location, design, setting, materials, workmanship, feeling, or association.”). Thus, while the characteristics of a historic property must be considered if the characteristic qualifies the property for inclusion on the National Register, there is no authority for placing a thumb on the scale for any historic property.

Although NPS states that there is little point in “revisiting disagreements” regarding the conclusions in the CREA or the December Response, it states that there is a “major error in the methodology used in” the CREA and December Response. *Id.* at 3. Specifically, it quotes the following sentence from page 30 of the December Response:

“Under the NHPA Section 106 process, the consideration of cumulative effects is used to determine whether there are adverse effects on the historic properties previously identified in the process as potentially affected by the action at issue. 36 C.F.R. 800.5.”

Id. After the quote, NPS states that that “language is not found within existing Section 106 regulations or related NEPA guidance.” *Id.* That is true, but when compared to the language in Section 800.5(a)(1), which it paraphrases, it is clear that Dominion’s statement is accurate. 36 C.F.R. § 800.5(a)(1) (“Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.”). As can be seen, Dominion’s quoted language above addresses just one type of effect that may be determined to be adverse, while Section 800.5(a)(1) notes three types ((1) reasonably foreseeable effects later in time; (2) reasonably foreseeable effects removed by distance; and, (3) cumulative effects). The methodology in the CREA and the December Response are sound and consistent with the regulations.

In any event, aside from stating that the language from the December Response is not found in the regulations, NPS provides no explanation as to why it would constitute a “major error,” or any error at all.²³ Instead, NPS claims that the analysis in the CREA, while based on “much solid information and analysis,”²⁴ does not “base its analysis on an appropriate consideration of the exiting character of the James River and its shoreline” because it “exaggerates the visual effects of the limited modern development on the shores of the James.” *Id.* According to NPS, integral to understanding individual adverse effects and any cumulative adverse effects is an “accurate assessment of the character of the James River and its shoreline.” *Id.* at 4. While NPS “recognizes that there is modern development along the James within the [Historic] District,” its opinion is that such “development is not highly concentrated and is quite muted by shoreline vegetation in many cases.” *Id.* The result, NPS asserts, is a landscape that “retains a character evocative of the 17th-century.” *Id.*

Importantly, at no point did NPS suggest that the CREA or any other record evidence overstate, understate, or misstate the existence of the development and modernity present in the APE.

²³ Instead, NPS simply stated that the quoted language “misrepresents the very nature of analyzing or understanding cumulative effects.” NPS July Letter at 3. While NPS does not state what the very nature of analyzing or understanding cumulative effects is, Dominion believes that an analysis that properly places the consideration of cumulative effects within the context dictated by ACHP’s regulations does not make any misrepresentations.

²⁴ *Id.* at 3 (noting that the CREA’s analysis evaluates “known, existing adverse effects and impacts within the project APE such as existing development, and it rightfully included beneficial factors such as the vast amount of land conservation efforts”).

Instead, NPS draws a different conclusion from the evidence in the record regarding the character of the landscape. As noted above, and in the White Paper (at 3-4), reasonable minds can differ about the nature and severity of visual effects, as well as about the existing character of the James River in the area of the proposed Project. As the Corps has stated, the NHPA § 106 “regulations do not require that we, and the consulting parties, reach agreement on the severity of effects.” Corps April Letter at 6. So too, there need not be agreement regarding how to define the character of the landscape in the APE.²⁵

The NPS states that the effects of the existing development and modernity on the historic properties are “minor.” NPS July Letter at 4. Dominion believes the CREA’s discussion of past and present actions adequately summarizes the existing conditions within the APE, and the effects that may flow from such actions, and generally is consistent with NPS’ statement that the those effects are minor. Consistent with the SCC’s conclusions, the level of development and modernity is evident such that the landscape does not necessarily reflect a wholly pristine, 17th century landscape, but the area of the James River has mixed progress with history successfully. White Paper at 3-4. This fact evinces a reality about the area; despite the location of several large industrial sites, residential development, commercialism, utilities, and a working river, among other things, in the APE, as NPS has noted, it also is home to very successful conservation and preservation actions that have provide an ability to absorb and neutralize adverse visual effects. The breadth of the river, its bend around Hog Island, and the length of the APE also create an ability for the area to absorb impacts. These facts do not belie the cumulative effects analysis in the CREA and the record, but rather, inform it.²⁶

NPS states that the cumulative effects analysis did not recognize the negative impacts the Project would have on existing and potential future conservation and preservation efforts. *Id.* at 3. While specifically identified potential future conservation and preservation efforts are addressed below, as well as in the White Paper, it must be noted that the Section 106 process is focused on addressing effects on historic properties, not effects on conservation and preservation activities more generally. Nevertheless, to the extent conservation and preservation efforts have resulted in properties that have been identified as historic properties, those areas were addressed in the CREA’s cumulative effects analysis. December Response at 32-33. Further, to ensure a robust analysis of all of the past and present actions and land use in the APE, the CREA discusses conservation and preservation efforts that have otherwise occurred in the APE and would act to limit the ability for future development that might create visual impacts on historic properties, or physical impacts on the CAJO Trail or Historic District. Related thereto, the Corps requested, and in May 2016 Dominion provided, a map that depicts the extent of conservation and preservation lands in and nearby the APE. *See* Conservation Lands Map. It confirms the vast extent of land within the APE under conservation and not available for development. To the extent that there are currently unplanned, future conservation and/or preservation efforts, a failure to include a discussion and evaluation thereof does not render the cumulative effects analysis deficient. The Corps is only required to evaluate reasonably foreseeable future actions;

²⁵ Disagreement about how to characterize or interpret record evidence does not render agency action invalid. As is well known, agency action is invalid when its conclusions are arbitrary and capricious (*e.g.*, its conclusions are not supported by the record evidence).

²⁶ The Truescape photos and simulations from the river accurately and reliably show the views of the existing state of the landscape from the water, as well as the visual effects of the Project from the water. *See* Photo Simulation Overview (Apr. 7, 2016, revised June 7, 2016 and Aug. 12, 2016)

it is not required to speculate on what might happen someday. December Response at 30-31, 33-35. This is true for potential future development as well as conservation.

Finally, NPS states that the Historic District is composed of a group of important historic properties, each of which has historical significance that is thematically related. It also states that the historical integrity of each of the historic properties contributes to the historic integrity of the Historic District as a whole. NPS July Letter at 4-5. From this, NPS concludes that “cumulative effect to the [Historic] District and each resource is compounded by the fact that all of the key historic properties that make up the [Historic] District experience diminished integrity through the adverse effects to each individual property.” *Id.* at 5 (discussing the historic properties as a thematically-related collection). On the surface this statement has some initial appeal. Upon examination, however, it cannot carry the day.

As discussed above, under Section 800.5(a), cumulative effects are one type of effect of the undertaking that may meet the criteria leading to an adverse effect determination. Those criteria focus on effects to characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Thus, a general statement that an adverse effect to one historic property in the APE diminishes the integrity of another because they are both within the Historic District substitutes an opinion about the relationship between historic properties for the required analysis regarding effects. Further, to claim that any effect to one historic property should be attributed to any other historic property, and the Historic District, as a blanket compounding rule runs the risk of overstating potential cumulative effects. It also assumes that a Project-caused cumulative effect to one historic property rightly can be considered the cause of a cumulative effect to another property, without analysis. While Dominion does not dismiss completely that there may be factual circumstances in which a Project-caused cumulative effect to the integrity of one historic property may, in-turn, effect the integrity of another historic property, applying a blanket compounding rule without analysis is not appropriate. That is particularly the case here where, consistent with the regulations, the CREA has evaluated the effects of the Project (including cumulative effects) on each of the historic properties that are located in whole or part in the Historic District, and well as the Historic District individually as a whole. Thus, impacts to the Historic District (and its component parts) have been evaluated.

Response to Cumulative Effects Comments Regarding Colonial Parkway

NPS asserts that the Colonial Parkway was designed to provide visitors with an “experience that would transform their sense of time and place from the modern day back to the Colonial period as they traveled between Jamestown, Williamsburg, and Yorktown,” and that because the Project will be visible from a portion of the parkway along the river east of Jamestown, the Project “will damage major character-defining features of the Parkway and alter the experience the Parkway was intended to provide.” NPS July Letter at 5. From this, NPS asserts that the minor visual effects from existing modern intrusions on the parkway will combine with the major effects of the Project and “tremendously damage the views” such that the parkway views will no longer be evocative of the 17th century. *Id.* at 5-6.

As discussed in the White Paper, NPS greatly overstates the case. White Paper at 9-11.²⁷ The closest Project tower will be over 3.5 miles away. As discussed above, that distance is well within the area NPS refers to as the background/horizon. The Truescape photos and simulations from the Colonial Parkway KOPs show that the towers, while visible from the parkway, would blend substantially into the background because the intensity diminishes with distance and photos from viewpoint 9 demonstrate that viewers' eye are more likely drawn to the existing duck blind in the foreground.²⁸ That conclusion is confirmed by the more recent photos of the transmission line crossing at the James River Bridge Dominion provided in May 2016 (and for which Dominion submitted a consolidated photo and simulation booklets to the Corps in June 2016 (revised in August 2016)). The conclusion also is confirmed by the in-river photos and simulations from viewpoint (VP) 01, which is located in the river just south of the middle/western portion of the parkway. Photos from VP01 also show that, in addition to the Kingsmills Resort, the Busch Gardens rollercoaster and Mach 1 tower are visible from this area, as are the existing transmission structures and the nuclear power plant on the Surry side. *See also* White Paper at 10 (noting currently visible developments from the parkway). These facts support the conclusion that impacts from the Project on the Colonial Parkway would be minimal. *Id.* at 9-11.

That conclusion is supported further by the fact that it is only a small portion of the Colonial Parkway from which the Project's river crossing could be seen. The parkway is twenty-three miles long, and as NPS notes, stretches from Yorktown to Jamestown.²⁹ The vast majority of the parkway is not affected by the Project in any way.³⁰ Further, the visual impacts to the parkway have no impact on the characteristics for which the parkway was listed on the National Register. White Paper at 10-11. This point is critical because, as discussed, the focus of the effects inquiry under the NHPA § 106 regulations is on the effects to the characteristics that qualify the historic property for listing on the National Register. 36 C.F.R. § 800.5(a)(1). These facts further cut against NPS' claim that the Project would have a major effect on the parkway, or its ability to transform visitors' sense of time and place. Further, as the map demonstrates, for visitors heading toward Jamestown from Williamsburg, they will be heading nearly directly south with views of the river and Hog Island until they turn right (west) to travel along the river facing west with views of the river and Jamestown Island (they also may see the above noted existing transmission lines and power plant on the Surry side from here). Thus, for western bound travelers, the chances of even seeing the distant Project are negligible. Travelers heading from

²⁷ Prior statements from NPS regarding the construction and purpose of the parkway also undercut, to some extent, NPS' statements regarding the purpose of the parkway's design. According to a 1988 report, NPS states that the purpose of the parkway was to unify and provide access to three main historic areas (Jamestown, Williamsburg, and Yorktown), each of which represented a phase in American colonial history. Somewhat contrary to NPS' statement in the text, the "route of the parkway follows no colonial road; colonial road builders would not have chosen to cross marshes and the mouths of creeks as the parkway does." NPS, Colonial Parkway, Written Historical and Descriptive Data at 1, 2 (1988) (the parkway design was intended "to serve not only a means for visitors to enjoy the park but also to limit the speed and numbers of vehicles on the road itself"; although it also was designed to complement the natural environment in the park).

²⁸ Further, as discussed in the White Paper, it is only the eastern portion of the parkway that has unobstructed views of the far-off towers. Those views become more obstructed by Hog Island as one travels west along the parkway toward Jamestown to the point where they are fully obstructed. White Paper at 10.

²⁹ NPS, Colonial Parkway, at <https://www.nps.gov/colo/parkway.htm> (last visited Aug. 1, 2016); NPS, Colonial Parkway Map, at <https://www.nps.gov/colo/planyourvisit/maps.htm> (last visited Aug. 1, 2016).

³⁰ As discussed in the Heritage Tourism Assessment, there is a substantial amount of modern development nearby the parkway as it traverses the Williamsburg area. Heritage Tourism Assessment at 6.

Jamestown to Williamsburg are much more likely to see the Project as they travel east and the Project becomes less and less obstructed by Hog Island. At this location, these travelers' other views are of the river, Kingsmill Resort, Busch Gardens and the other modern developments noted above. Once these travelers make the left turn north to Williamsburg, neither the Project nor the river would be visible.³¹

Against this backdrop, the ability of the minimal existing visual effects to accumulate with the minimal projected visual effects from the Project is limited. As noted, for those traveling by car along the parkway as NPS envisioned, travelers would be subjected to varying modern visual effects for short periods as their views changed from Yorktown to Jamestown. It is only in the brief area along the eastern portion of the parkway along the James River that we see an ability for existing visual effects to combine with the visual effects of the Project. For the car-traveler this opportunity is fleeting, although less so for those that may stop along the road to take in the view. And here, the incremental additional visual effects would be at the background/horizon, just as, for example, the visual effects from the Kingsmill Resort or Busch Gardens would be. Under such circumstances, it is reasonable to conclude that any cumulative effects on this portion of the parkway would be minimal. There would not be any cumulative effects on the rest of the parkway.

NPS also states that the cumulative effects analysis should analyze impacts to NPS' vegetation management and long-term parkway management activities. NPS July Letter at 6. NPS does not discuss its vegetation management plans in the July letter, but it did mention them in its January 28, 2016, letter, which is addressed in the White Paper. As discussed, NPS cited a 2001 document that provided that vegetation had become overgrown in many areas that it obscured intended views, and it appears that such vegetation continues in this state. NPS does not appear to regard this vegetation as character altering, even though it would prevent, up close, a viewer from taking in the intended views. Under these circumstances, the reasonable conclusion is that the Project has no effect on how or when NPS performs vegetation management. White Paper at 10. In any event, NPS did not indicate that it let the vegetation become overgrown in an effort to shield would-be viewers from seeing other modern development from the parkway. Thus, it would appear that exiting modern development has no effect on NPS' vegetation management. As such, there would be no effects from the existing modern development with which effects from the Project could accumulate, assuming there were any. The same holds true for NPS' long-term parkway management activities, whatever they might be.³²

Response to Cumulative Effects Comments Regarding Jamestown

NPS states that its discussion about cumulative effects regarding the Colonial Parkway apply to the cumulative effects analysis regarding Jamestown. NPS July Letter at 6. As such, Dominion's discussion above also applies to the cumulative effects analysis regarding Jamestown. We also note that, as discussed in the White Paper, the Project's visual effect on Jamestown is even less severe than it is on the Colonial Parkway. White Paper at 7-9. As noted therein, some of the Project's towers or portions thereof are visible from Jamestown, however,

³¹ If travelers were to stop along the parkway, then their views would be as noted above from the Colonial Parkway KOPs, or similar thereto.

³² Because such activities are unstated by NPS and otherwise unknown, they are not reasonably foreseeable, and thus, need not be considered in the cumulative effects analysis. December Response at 30-37.

only from the far eastern point, Black Point.³³ Like the views from Colonial Parkway, the Project is over 3.5 miles away, at the background/horizon. Thus, like the views from Colonial Parkway, the Truescape photos and simulations also confirm that any views of the Project from Black Point would be negligible. *Id.* at 7. The views of modern development from Black Point are similar to those from the Colonial Parkway. *Id.*

Against this backdrop, the ability of the minimal existing visual effects to accumulate with the minimal projected visual effects from the Project is even more limited than in the case of the Colonial Parkway. The only time those effects could accumulate is when a person travels to Black Point. This is a very small part of the larger island that otherwise remains unaffected by the Project. And here again, the incremental additional visual effects would be at the background/horizon, just as, for example, the visual effects from the Kingsmill Resort or Busch Gardens would be. Under such circumstances, it is reasonable to conclude that any cumulative effects on this small portion of Jamestown would be minimal/negligible.

Also like its discussion of Colonial Parkway, NPS states that consideration must be given to cumulative effects on the future management plans for Jamestown. NPS July Letter at 6. NPS does not provide any specific information about what these future plans might be, and instead notes only that it “continues to consider improving the visitor experience through potential efforts that could include additional visitor services or landscape rehabilitation efforts that reach Black Point.” *Id.* NPS notes that Black Point is a key view and interpretation point for the James River, but states only that the location “has tremendous potential for interpretation” and that any “future efforts at Black Point would be greatly inhibited” by the Project. *Id.* Like Colonial Parkway, NPS does not identify any future management plans, visitor services, landscape rehabilitation projects, or interpretive projects, let alone any that could be considered reasonably foreseeable for cumulative effects purposes. As such, they need not be considered as part of the cumulative effects analysis. December Response 30-37. In any event, it appears that NPS does not consider even the minimal visual effects from current modern development to have an effect on future management plans at Jamestown. Dominion would agree with that position. As such, there would be no effects from the existing modern development with which effects from the Project could accumulate, assuming there were any.

Along similar lines, NPS argues that cumulative effects analysis must include consideration of effects to the “NPS efforts to have Jamestown considered a UNESCO World Heritage Site.” *Id.* at 7. As discussed in the White Paper, the record reflects that the chance of any site, including Jamestown, becoming a World Heritage Site is extremely unlikely, and subject to multiple variables well outside of the purview, control, or influence of the Corps in this, or any other permitting process. White Paper at 8-9. Even assuming that were not the case, record evidence also demonstrates that the presence of transmission or distribution lines near a site does not

³³ NPS states that “view of the project are not likely to be prominent from the settlement.” NPS July Letter at 6. This statement is contradicted by all of the record evidence. The Project will not be visible from the Jamestown settlement. White Paper at 7- 8. NPS’ own website regarding the area demonstrate this fact, as any view from the settlement eastward toward the Project would be blocked by the pitch and tar swamps, as well as all of the tall trees along and surrounding Island Loop Drive. NPS, Jamestown Maps, at <https://www.nps.gov/jame/planyourvisit/maps.htm> (last visited Aug. 1, 2016); NPS, Island Loop Drive, at <https://www.nps.gov/jame/island-loop-drive.htm> (last visited Aug. 1, 2016) (based on NPS’ pictures, the Project would not be visible until one got out of the car on Island Loop Drive and walked the trail through the trees to Black Point); see also NPS July Letter at 6 (acknowledging preservation efforts at the Jamestown settlement would not be affected by the Project).

preclude its selection as a World Heritage Site. *Id.* The record supports the reasonable conclusion that the Project will have no effect on the ability for Jamestown to become a World Heritage Site. *Id.* Even if it did, it appears that NPS does not consider even the minimal visual effects from current modern develop to have an effect on future management plans at Jamestown. Dominion would agree with that position. As such, there would be no effects from the existing modern development with which effects from the Project could accumulate, assuming there were any.

Response to Cumulative Effects Comments Regarding the CAJO Trail

NPS asserts that the Project will have a “tremendous impact on the character of [the] CAJO [Trail] and the [Historic] District,” and restates its belief that those impacts are “major.” *Id.* at 7.³⁴ Despite acknowledging that the Project would not even be visible from the northern portion of the APE, NPS concludes that the Project would completely alter the charter of the CAJO Trail and change how it is experienced by travelers on the water and those looking from shore. *Id.*

As set forth in the White Paper, NPS’ conclusions are not supported by the record. For example, the Truescape photos and simulations, including from within the river, demonstrate that when the Project is viewed from over 4 miles, it becomes faded into the background. The APE is 23 miles long. Therefore, the Project cannot be seen (or barely seen) from more than half of the APE, and thus, more than half of the Historic District and CAJO Trail. White Paper at 4-7. Further, contrary to NPS’ suggestion that “no matter which direction” a visitor looks she will see the Project, just based on its sheer size of the Historic District and CAJO Trail, numerous visitors could visit the Historic District/CAJO Trail and never see the Project. As discussed above, this is particularly true for those that visit Jamestown and do not go to Black Point,³⁵ or as NPS acknowledges, stay in the northern portion of the APE. Also contrary to NPS’ assertions, as the in-river photos that Dominion provided demonstrate, there are numerous ways for a traveler to manage her view so as not to see the area where the Project crossing is located. *See, e.g.,* the cross-river and downriver views from VP10, VP09, and VP06. In addition, the photos and simulations demonstrate that from VP06 (which is 5.4 miles from the Project crossing) looking north, upriver, through the Ghost Fleet, the Project would not be visible. This is demonstrated through the additional work Truescape did to show the viewer where the Project would be by coloring the structures bright yellow on an additional simulation page.

The visual effects of the Project on the Historic District/CAJO Trail will be most pronounced for those traveling near the Project, in middle of the APE. *Id.* at 5. As discussed in the White Paper, however, while the Project will affect the setting and feeling of this portion of the Historic District/CAJO Trail, it will not impact the resources’ association with Indian inhabitants or the settler’s colonization, or otherwise change the collection of properties that make up the Historic District: that is, the reasons and characteristics the Keeper identified when determining the Historic District was eligible for the National Register, or that the CAJO Trail was part of that

³⁴ NPS then states that the CREA misrepresents the severity of the effects of the Project on the Historic District and CAJO Trail because, it claims, the CREA only says the Project will be visible from the CAJO Trail, and fails to state that the Project will cross the trail. *Id.* That is not accurate. In a number of places, the CREA expressly notes that the Project crosses both the Historic District and the CAJO Trail. *See, e.g.,* CREA § 3.35.3.

³⁵ Anecdotal evidence in the record suggests that visiting Jamestown and focusing on the settlement is by far the more prevalent type of visit. Heritage Tourism Assessment at 6-7.

district. *Id.* As concluded in the White Paper, the effects of the Project on the Historic District/CAJO Trail will be minimal. *Id.* at 4-7.

As discussed above, NPS has concluded that the impacts of modern development are minimal. The incremental, and thus, cumulative effect of the Project also should be minimal. The Project cannot be seen from the northern and southern portions of the APE, areas covering well over half of the Historic District/CAJO Trail. As such, there will be no opportunity for the effects of modern development to accumulate with the effects from the Project. Also, depending on a viewer's location, and based on distances within the APE, there also are numerous places from which a viewer might be able to see the Project, but not other modern development. For example, a boater located north of VP09 nearby the Ghost Fleet likely would have a view of the Project by looking past the modern channel maker in the foreground, but would not be able to see the Kingsmill Resort or BASF facility further north. In addition, a boater's orientation on the water would continually change the ability for modern development and Project effects to accumulate. As one approaches the Project crossing, for example from the south heading up river, the opportunities for visual effects accumulate until one crosses under the Project. Thereafter, unless the boater looks backward down river, there would no longer be any cumulative effects. In addition, as the Truescape photos and simulations, both from the shore and in-river, demonstrate, the potential severity of any visual effects from the Project decreases rapidly as one moves away from the Project. The photos of the James River Bridge transmission line shows that at approaching 2 miles, the towers although visible are more of a background feature. *See supra* note 13 (NPS stating that background starts at 2 miles). These facts diminish further both the ability for modern development and Project effects to accumulate, and further enhance the discussion about the limitations on opportunities for accumulation. The foregoing demonstrates that NPS' claim of cumulative effects that destroy the landscape is not supported by the record. Instead, it is reasonable to conclude that any cumulative effects would be minimal, and localized to the area nearby the Project crossing. *See* White Paper at 4.³⁶

Response to Comments Regarding Land Conservation and Precedent of Permit

NPS acknowledges that the CREA sets out the past and present land conservation and preservation actions, and believes those efforts provide excellent protective measures. NPS July Letter at 8. NPS argues, however, that the CREA's conclusion that such actions show why it would be more difficult for other projects to be developed in the area is contradicted by the fact that the Project is being permitted through the center of the Historic District. *Id.* At no point does the CREA suggest that the conservation and preservation actions in the area are iron clad, or otherwise will forever prevent development. What the CREA states, and what is demonstrated by the Conservation Lands Map, is that while the river itself, and thus, the Historic District, currently are not conserved or preserved from development, a large majority of the

³⁶ NPS also argues that, while "less predictable," the Project will induce future development in the area because it will provide additional, more economical power to the peninsula. As such, NPS asserts that cumulative effects regarding developmental effects on all historic properties should be considered. NPS July Letter at 8. The CREA's cumulative effects analysis already considered all reasonably foreseeable actions and projects, along with past and present actions and project, and what cumulative effects, if any, they would have with the Project. CREA §§ 5.2, 5.3, 5.4. Aside from speculation, NPS has not identified any reasonably foreseeable future actions based on the Project's ability to provide electricity. As noted above, the purpose of the Project is to maintain Dominion's ability to provide power to meet current and projected demands that will exist with or without the Project. Thus, it is not intended to, or expected to be growth inducing like, for example, a new highway interchange. December Response at 30-37.

shore line, and in many cases well inland, are protected. Those protections will make it more difficult for future projects to traverse the James River in this area, or otherwise be constructed nearby the shoreline so as to produce visual effects on the Historic District or other historic properties. The CREA's conclusions drawn from the record evidence regarding conservation and preservation lands are reasonable.

Finally, NPS states that granting the permit will create an industrial/commercial corridor in this area, and otherwise open the door to subsequent development and its associated cumulative effects. As discussed above, the CREA did not identify any reasonably foreseeable future actions seeking to traverse this area of the James River, thereby creating an industrial/commercial corridor. Similarly, it did not identify any other reasonably foreseeable future development actions, other than those noted therein, and certainly did not identify any such actions subject to the Corps' permitting authority. The Corps is not required to speculate on the potential cumulative effects of future, unknown and not reasonably foreseeable projects. December Response at 30-37.

If you have any questions regarding this response, please contact me.

Sincerely,



Scott C. Miller
Vice President- Transmission
Dominion Virginia Power

Attachment 1

**Surry-Skiffes Creek-Whealton 500 kV Project
White Paper Regarding Severity of Impacts on Historic Properties**

August 31, 2016

Surry-Skiffes Creek-Whealton 500 kV Project White Paper Regarding Severity of Impacts on Historic Properties

August 31, 2016

This white paper discusses issues regarding the severity of the impacts on historic properties from Dominion's Surry-Skiffes Creek-Whealton 500 kV project ("Project"). It does so in the context of, and in response to, a letter from the National Park Service ("NPS") setting out its opinion regarding the severity of impacts of the Project for some of the historic properties at issue. Letter from F. Hays, NPS, to W. Walker, USACE (Jan. 29, 2016) ("NPS Letter").

As the NPS Letter exemplifies, and as the U.S. Army Corps of Engineers ("Corps") is aware, there is a divergence of opinions regarding the extent of adverse effects on the historic properties at issue. Of note, the NPS Letter claims that the Corps has failed to describe the effects on the historic properties, and provides its assessment of the severity of impacts for the Jamestown National Historic Site/Jamestown Island/Jamestown Island Historic District ("Historic District"),¹ including the contributing section of the Captain John Smith Chesapeake National Historic Trail ("CAJO Trail"),² Jamestown National Historic Site, and Colonial Parkway Historic District. NPS Letter at 2-8. As this white paper explains, NPS' claim is incorrect; the severity of impacts is discussed and assessed in the record, and the conclusions related thereto well supported.

A. Terms and Hierarchies Regarding the Severity of Impacts

In its assessment, NPS notes that Dominion previously introduced a hierarchy for characterizing the severity of adverse effects for purposes of the National Environmental Policy Act ("NEPA"), and NPS uses it to provide its assessment. NPS Letter at 2 (referencing, although not specifically citing, Dominion's November 13, 2015, white paper titled "Evaluating Visual Impacts on Historic Properties Under NEPA" ("NEPA White Paper")). While Dominion does not have an issue with NPS' use of that hierarchy for purposes of its assessment, we note here, as was noted in that white paper, that the hierarchy was provided only as an example—an example that came from a prior NPS evaluation of impacts related to a shoreline restoration project for the Colonial Parkway. As Dominion also noted therein, that hierarchy "used a fairly stringent relationship between the intensity of the NEPA impact found and the NHPA findings regarding adverse effects." NEPA White Paper at 2. Dominion noted that while those stringent relationships may have been appropriate for NPS' purposes for that project, the Corps "should not consider itself

¹ When the Keeper of the National Register determined this district was eligible for the National Register, it did not establish a formal name for it as a historic property. In the record, it has been referred to as the Eligible Historic District, and, before the Keeper's determination, was known as the Jamestown Island-Hog Island Cultural Landscape. The Virginia State Historic Preservation Officer ("SHPO") has referred to this property as the Captain John Smith Trail Historic District. In the 36 C.F.R. § 800.6 draft Memorandum of Agreement ("MOA"), the name for this historic property is the Jamestown Island-Hog Island-Captain John Smith Trail Historic District. So, we use this latter name here.

² NPS separately assesses the CAJO Trail, consistent with its argument that a separate analysis of the CAJO Trail is necessary. NPS Letter at 4-6, 7-8. As discussed below, this evaluation is nearly verbatim with the evaluation NPS provides for the Historic District, which undermines its argument that the CAJO Trail must be evaluated separately.

bound to such an approach.” *Id.* Thus, we went on, “under its independent review, [the Corps’] methodology could permit it to conclude that a minor impact might correlate with either an NHPA evaluation of no adverse impact or [an] adverse impact, instead of only correlating to a no adverse impact, as was done by NPS.” *Id.* Dominion suggested that a more flexible approach would provide the Corps with “the opportunity to consider more closely the record information regarding impacts,” instead of being bound strictly to pre-selected NEPA conclusions based on NHPA determinations. *Id.* Indeed, the Corps need not tie its NEPA and NHPA findings together through any pre-selected hierarchy, but for consistency, likely should consider single severity conclusions for purpose both statutes.

Similarly, the sample hierarchy provided in the NEPA White Paper used the following terms for severity of effects categories: negligible, minor, moderate, and major. *Id.* at 1-2. The Corps need not be bound by these terms or categories. For example, the Corps could use the term minimal to describe the severity of an effect, which is a term used in the Cultural Resources Effects Assessment (Sept. 15, 2016) (“CREA”), and can be considered synonymous with either negligible or minor, depending on the circumstances.

Because of the many facts and historic properties at issue, Dominion urges the Corps to use a hierarchy or methodology that provides the Corps the most flexibility to consider fully all of the facts and circumstances at issue for each property when making severity conclusions. We believe this will avoid needless (and fruitless) arguments about terminology related to effects categorizations, and focus the inquiry where it should be—on the nature of actual effects on the historic properties.

B. NPS’ Severity Assessment

Because the NPS and other consulting parties have critiqued the evaluation of effects set forth in the CREA negatively, *see, e.g.*, NPS Letter at 1-2, the conclusions in NPS’ severity assessment differ greatly from the analysis set out in the CREA. While the CREA does not assign a single-word, severity of effects conclusion for the historic properties for which an adverse effects determination has been made, the evaluation focuses on assessing the visual contrast of the Project, the visual qualities and character of the viewsheds at issue, why the historic properties are listed on or qualify for the National Register, and determining impacts on potential, typical viewers and their potential sensitivity to visible changes in the landscapes and viewsheds at issue.³ The CREA’s evaluation also is focused closely on the mandate of Section 106, and centers on impacts to the applicable aspects of integrity adversely affected.⁴ Thus, the CREA

³ This is consistent with NPS’ own guidance regarding the assessment of visual impacts from, among other things, transmission lines. NPS, *Guide to Evaluating Visual Impact Assessments for Renewable Energy Projects* § 3.11 (Aug. 2014) (“NPS Guidance”).

⁴ Consistent with 36 C.F.R. § 800.5(a)(1) and the Corps’ NHPA Section 106 regulations at 33 C.F.R. pt. 325, App. C, the CREA evaluated effects against the seven aspects of integrity, location, design, setting, materials, workmanship, feeling, and association for each historic property, considering the reasons those properties were listed on or qualify for listing on the National Register based on National Register eligibility criteria. CREA § 2.0. A discussion of the values each of these aspects embraces is set out in the NPS guidance document discussed in CREA § 1.4. Most relevant here: setting “is the physical environment of a historic property that illustrates the character of the place”; feeling “is the quality that a historic property has in evoking the aesthetic or historic sense of a past period of time. Although it is itself intangible, feeling is dependent upon the significant physical

provides a detailed description of the nature and severity of the impacts. It also is important to note that the CREA was not created, and does not reside, in a vacuum; the record before the Corps is replete with information relevant to the potential impacts of the Project on the historic properties. For example, the record from the Virginia State Corporation Commission (“SCC”) proceedings also contains numerous reports and testimony regarding the potential impacts. *See, e.g.*, SCC Order at 47-51 (Nov. 26, 2013) (claims that there are significant visual impacts to historic properties are not supported by the record); SCC, Hearing Officer’s Report at 134-40, 175 (Aug. 2, 2013) (same).

NPS concludes that the impact of the Project on all of the historic properties it evaluates is “major,” and would result in the actual loss of a character-defining feature and would diminish the overall integrity of the resource. NPS Letter at 2-8. Those conclusions are discussed briefly below and compared with the evaluation of the resources in the CREA.

1. Historic District

The basis for the NPS’ assessment of this resource is the assertion that there is one set of interconnected physical features that dominates the setting and feeling of the Historic District, and that “set of features consists of the uncrossed James River and its surrounding shoreline.” NPS Letter at 3. Specifically, NPS states that the James River is “unblemished by any man-made physical crossing” and regardless of where viewed from, that view is “one of broad, open, unmarred water and sky surrounded by an extensively wooded shoreline.” It also claims that this area of the James River still reflects a 17th-century character. *Id.* at 3-4. From this, NPS claims, without explanation, that the placement of the towers will permanently destroy the character-defining feature of the unblemished river. *Id.*

Initially, it is worth noting that nothing in the Keeper’s determination of eligibility stated that an unblemished river was the character-defining feature of the district. The Keeper instead focused on the area’s association with the Indian inhabitants, the settlers’ colonization, and the collection of other historic properties within the area.

In any event, NPS’ description of the area is selective, and fails to account for the fact that, while some views certainly may be evocative of the 17th century, the record demonstrates that much has changed in this area. Near the proposed Project route, there is a large, former industrial site currently being remediated for environmental contamination (the BASF site), the Surry Nuclear Power Plant, a large military installation, a sewage treatment plant, multiple residences, a resort, a marina, a golf course, the Ghost Fleet, and a theme park, among other things, all of which are in view of and across the Historic District landscape (day and night). SCC Order at 13, 48 (Nov. 13, 2013); SCC, Hearing Officer’s Report at 138-40. What also cannot be ignored is that the James River is a working river. The Corps conducts dredging in the navigation channels through this area to ensure the river is passable. This channel is well-marked by brightly colored, lighted (and even a couple of sound-producing) aids to navigation throughout the entirety of the Indirect APE. A James River Partnership report indicates nearly 2,000 vessel round trips on the river by

characteristics that convey historic qualities”; and association “is the direct link between a property and the event or person for which the property is significant.” CREA § 1.4 (quoting an NPS guidance document).

ships and barges, not including the military, pleasure boaters, and dredging work vessels. And, although not visible on the surface of the river, there are two natural gas pipelines and one petroleum pipeline that cross the James River in the area, as well as a number of oyster leases. Despite the preservation and conservation successes in this area of the James River, it cannot reasonably be said to be unblemished, nor reflecting a 17th century character. As the SCC concluded, this area of the James River has mixed progress with history, but has done so successfully. SCC Order at 48 (Nov. 26, 2013). Unlike the NPS assessment, the CREA takes these facts into consideration. CREA § 3.35.4 (discussing these modern intrusions, including piers and structures into the river from the resort, private residences, and military base).⁵ Additional record evidence in the form of photos and simulations, including Truescape photos and simulations submitted in May 2016 and incorporated into the updated Photo Simulation Overview, confirm these facts.⁶

In light of these visual and physical realities, the NPS' conclusion that the Project will actually and permanently destroy a character-defining feature appears somewhat hyperbolic. That is supported by the fact that, as noted in footnote 5, the Historic District is 23 miles long, and in many places, well over 2 miles wide. From many places within the Historic District, the Project would not be visible at all. As the CREA discusses, based on photos of the existing transmission line crossing at the James River Bridge (which the Corps concluded during an on-the-river site visit, corroborate the accuracy of the photos and simulations in the record here),⁷ when viewed from approximately 4 miles or more away, while the Project might technically be visible, it would fade into the background so as to lose nearly all of its contrast, and thus, visual impact. CREA § 3.35.4, App. D.5.⁸ In addition, for people traveling on the water through the Historic District, once past the Project, its visual impacts would no longer impact the landscape. These facts, based on actual photo simulations and vetted comparisons, line of site analysis, and on the river field work stand in stark contrast to NPS' assertion that simply because the Project might be seen from a number of acres and other historic properties (this information is taken from the NPS' visual impacts analysis), and because the Project is tall and long, it will destroy the alleged character-defining feature of the river, and significantly diminish the setting and feeling of the Historic District and its contributing elements. *Id.* The CREA analysis is based on facts that

⁵ It also should be noted that, although not mentioned by NPS, the actual physical impacts of the towers on the Historic District (2,712 square feet) is miniscule in light of the size of the Historic District, which is coextensive with Indirect APE and extends 0.5 miles inland from the river, approximately 10 miles upstream of the Project, and 13 miles downstream from the Project. CREA § 1.3. Even using a single mile as the width of the James River in this area, which is less than half of the width of the river at the Project's crossing, the size of the Historic District would be 1,282,406,440 square feet (121,440 ft long (23 miles) x 10,560 (2 miles wide)).

⁶ The May 2016 photos were incorporated into the document entitled *Photo Simulation Overview: Surry-Skiffes Creek-Wheaton Transmission Line Project, Surry, James City, and York Counties, Cities of Newport News and Hampton, Virginia* (April 7, 2016, revised June 7, 2016 and August 12, 2016) ("Photo Simulation Overview").

⁷ The verification of the accuracy of the photos and simulations in the record also is explained and supported by the Photo Simulation Overview. This document also makes clear that the photos and simulations in the record are consistent with the NPS Guidance. In addition, on June 20, 2016, the Corps sent an email to the Advisory Council on Historic Preservation ("ACHP"), the SHPO, and the Consulting Parties stating that, based on the record materials and its field visits, the photos and simulations were accurate, and reliable ("Corps Email").

⁸ Truescape photos and simulations showing on-the-river views show that the Project may be visible from just over two miles away. However, given the water and sky backdrop against the weathered galvanized structures and because the camera was just above water level, the structures are not a prominent feature in view.

provide the Corps with a detailed, actual ability to consider what the Project would look like, and provide the Corps with facts that consider the real-world realities of how visible effects would diminish as distance from the Project increases, among other things. The CREA concludes that the effects of the Project on the Historic District would be minimal at the northern and southern portions of the district, but more pronounced near the Project crossing. As the CREA discusses, these impacts will diminish the setting and feeling of the resource to some extent. The Project, however, will not impact the resource's association with Indian inhabitants or the settlers' colonization, and will not change the collection of other historic properties that make up the district. Thus, the Project would not impact greatly the areas of significance (exploration/settlement, ethnic heritage, and archeology) the Keeper stressed when determining the district was eligible for listing on the National Register under Criteria A, B, C, and D. *Id.* §§ 3.35.1, 3.35.4. Based on the forgoing, and in light of the other modern intrusions, the overall size of the district, and the diminishment of the effects as distance increases, the severity of the adverse effects appear to be moderate at best, but most likely minimal.

This conclusion is supported by NPS Guidance, which states that the focus should be on the impact to potential viewers, considering the types of viewers involved, their potential sensitivity to changes in the visible landscape, the likely duration of their views of the project, the activities in which they are engaged while viewing the project, and their expectations for scenic quality in the area. NPS Guidance § 3.11. In light of the Historic District's location in the Historic Triangle, and the inclusion of Historic Jamestown and the Colonial Parkway in the vicinity of Colonial Williamsburg and Busch Gardens, the vast majority of viewers likely will be tourists.⁹ It is reasonable to assume that some, maybe many, tourists may take the time to look out over the Historic District, and some may get out on the water. *See* NPS Letter at 7 (noting that many of the historic properties in the Historic District have designated visitor viewpoints of the river and that some visitors may "actually experience the area from the water"). It also is reasonable to assume that most tourists also will focus on the area's main attractions, such as Historic Jamestowne, from which the Project will not be visible.¹⁰ In addition, the duration of tourists' views of the Project will, by the very nature of tourism, be limited and temporary.

Another important factor is tourists' expectations. As has been discussed during the Corps' review of the Project, the Historic Triangle is a successful center of heritage tourism. As the National Trust for Historic Preservation ("NTHP") has stated in discussing the requirements and steps to take in establishing successful heritage tourism, in such places tourists expect, need, and demand, "places to eat, park, sleep, go to the restroom, and get gasoline,"¹¹ and that those

⁹ As the President and CEO of the Greater Williamsburg Chamber & Tourism Alliance put it: "Visitors are enjoying the full range of vacation experiences we have to offer from the arts to ecotourism to culinary to theme parks and water parks, as well as our world-class living history museums." Email from P. Goddard, NPCA to Col. J. Kelly, USACE (Nov. 4, 2015); *see also* NPS Letter at 9-10.

¹⁰ NPS recognizes the central importance of Jamestown. NPS Letter at 7; *see also* Assessment of Potential Impacts on Heritage Tourism at 6-7 (June 10, 2016) (providing information showing that the vast majority of tourists at Jamestown focus on the Jamestown Settlement and Historic Jamestowne areas, and not on the south-easterly river views from Black Point, the only place on the island from which the Project could be seen) ("Heritage Tourism Assessment").

¹¹ NTHP, Step One: Assess the Potential, at <http://www.preservationnation.org/information-center/economics-of-revitalization/heritage-tourism/basics/assess-the-potential.html#.VubVAU32bVg> (last visited Mar. 14, 2016); *see* Heritage Tourism Assessment at 1-5.

services require infrastructure that allow them to exist and function safely and reliably.¹² That infrastructure includes roads, sanitation, water services, health and safety services, and electricity. This is important because tourists' expectations for necessary and desired services at and nearby historic properties, as is the case in the Historic Triangle, have not repelled them from visiting and enjoying the historic properties. As the information in this paper reveals, the opposite is true. From that, it is reasonable to conclude that tourists also know and understand that the provision of infrastructure to power those services is necessary. That is, just as tourists expect to see such infrastructure near their own homes, they also expect to see it nearby historic properties. As such, while the Project's presence, for example, on the horizon may not be ideal for a tourist, the tourist also is accustomed to, and expects such sites so that any effect it has would be minimal, and importantly, would not detract in any significant way from the Historic District's integrity, and its ability to convey its historic experience and message.¹³

2. CAJO Trail

The NPS assessment of the severity of effects on the CAJO Trail follows the same reasoning as its assessment for the Historic District. NPS Letter at 4-6. Indeed, after NPS introduces the CAJO Trail as a significant historic property because it was a starting point and base of operations for Captain John Smith's voyages, it uses the same language to describe the effects thereon as it did for the Historic District. *Compare id.* at 3-4 *with id.* at 5-6. As such, the discussion above is applicable here. In addition, the CREA's evaluation of the potential for the Project to impact the integrity of the CAJO Trail further demonstrates that the severity of any effects on the CAJO Trail are moderate at best, but most likely minimal. CREA § 3.35.4. For example, while subject to negligible physical impacts (*see supra* note 6), the setting of the trail as a historical means of transportation and an origin of important social, economic, and exploration routes and voyages has not be changed or altered. While the Project will have an incremental impact on CAJO Trail's feeling, as the placement of the Project will, depending on a person's location on the trail, impact its ability to convey fully a sense of early English or tribal life, that impact should be minimal for the same reasons the impacts to the Historic District are minimal. *Id.*

The NPS complains that Dominion and the Corps have "continued to resist providing photographs and simulations from an adequate range of viewpoints along the trail" that would make an analysis of impacts on the CAJO Trail possible. NPS Letter at 4. This is incorrect. The CREA is replete with photographs of the trail from the shores of each of the historic properties evaluated. Further, as stated in the CREA:

Photographs taken *from the river* confirm the potential visibility associated with the proposed project as well as the general conditions within the river-based portion of the resource. Multiple photographs were taken *from within the bounds of the resource*; however a representative sample were chosen for inclusion in the report to present a broad overview of the resource and the

¹² NTHP, Step Three: Prepare, Protect, and Manage, at http://www.preservationnation.org/information-center/economics-of-revitalization/heritage-tourism/basics/prepare-protect-manage.html#_VubZQE32bVg (last visited Mar. 14, 2016).

¹³ Heritage Tourism Assessment at 6-7.

landscape as well as examples of the shoreline integrity throughout the area (Figure 171; Figures 166-179).

CREA § 3.35.4 (at 3.128). In addition, Dominion has provided additional photos and simulations regarding potential visual impacts from within the Historic District and on the CAJO Trail. As set forth in the Photo Simulation Overview and Corps Email, *supra note 7*, these photos and simulations accurately and realistically represent their subject matter and the potential visual impacts of the Project. These photos provide further corroboration of the statements and conclusions in the CREA regarding the Historic District and the CAJO Trail, including regarding the current state of the river in this area, the potential views of, from, and within historic properties (including of the proposed Project), and the minor and insignificant nature of any effects from the Project on historic properties or visitor experience.

3. Colonial National Historical Park/Jamestown Island

Like its assessment of the Historic District and the CAJO Trail, NPS' assessment of the severity of the impacts of the Project on Jamestown Island is focused on what NPS deems its character-defining relationship with the James River, which it again claims is evocative of the 17th century. NPS also claims that the views from Jamestown Island over the river "have been maintained unmarred for over 400 years." NPS Letter at 6. From this, NPS asserts that the placement of the Project will change Jamestown Island's setting from "evocative of the 17th century to views of a major industrial intrusion with the river." *Id.* As discussed above, NPS' assessment fails to account for the numerous modern intrusions visible from Jamestown Island. CREA § 3.33.2.4. NPS' conclusions also are at odds with facts regarding the extent to which the Project would be visible at all from Jamestown Island. As the CREA's line-of-sight and photo analyses demonstrate, along with other record evidence (included NPS' own visual impacts analysis), the Project would not be visible from the majority of the island, including the settlement and visitor area; views generally are blocked by natural vegetation on the island itself as well as by Hog Island and its natural landscape. *Id.* § 3.33.2.4, App. D.3. The only area from which the Project is visible during daytime is at the far east end of the island at Black Point. Even from that vantage point, nearly all of the Project is partially shielded from view by Hogs Island. As the simulations for this view demonstrate, the closest structure would be over 3.5 miles from Black Point. As noted above, at those distances, any visual contrast diminishes to the point of being negligible. *Id.*¹⁴ The facts provided by the CREA show that any visual impacts would be minimal at best, and would be most noticeable at night when the blinking lights on the tops of the towers were visible. Those lights, of course, would blend in with all of the lights from the modern intrusions in the area, including those at the Kingsmill Resort, the Surry Nuclear Power Plant, and the aids to navigation on the water. *Id.*

NPS tacitly admits that the Project is not visible from the majority of the island, and only minimally from the Black Point area, and thus, focuses the inquiry elsewhere by suggesting that consideration should be given to how the placement of the Project would impact future restoration work on Jamestown Island. NPS Letter at 6. It argues that landscape rehabilitation and restoration work for Black Point or the Jamestown settlement area "might be limited from

¹⁴ The additional in-river photos and simulations provided by Dominion in May 2016 that were incorporated into the updated Photo Simulation Overview provide further confirmation of that fact.

capturing more expansive views of the river.” *Id.* Contrary to NPS’ assumption, any landscape rehabilitation or restoration work at or near the Jamestown settlement would not change the fact that the Project cannot be seen from that location because, aside from the rest of Jamestown Island being in the way, the view is obstructed by Hog Island, as the CREA sets out. CREA § 3.33.2.4. With respect to Black Point, it is the nature of the geography (the location of Hog Island and the bend in the river) that limits any potential view of the Project from that location, not generally obstructions on Jamestown Island that might be removed or changed. Further, while it is true that most south-easterly river views from Island Drive on Jamestown are obstructed by natural vegetation, once one leaves that road and walks through the trees to Black Point near the river, the natural vegetation clears substantially to provide unobstructed river views, as the photos and simulations in the record demonstrate. Thus, there does not appear to be any landscape rehabilitation at Black Point that would be inhibited by the Project, even assuming a distant, faint view of a couple towers can be considered an inhibiting factor. Further, even if NPS cleared all of the vegetation in the Black Point area, the geography (the location of Hog Island and the bend in the river) that limits views of the Project from the island would not be changed, and thus, the amount of the Project seen would not change.

NPS concludes by asserting that there has been “consideration underway” for Jamestown and other related resources to be nominated as a UNESCO World Heritage Site, which it claims would benefit tourism. NPS Letter at 7. From this, NPS claims that any impacts on the landscape would preclude such a designation. As set forth in Dominion’s March 16, 2016, Response to Consulting Party Comments on the Draft MOA, there is no record evidence that the Project will affect the potential designation of Jamestown as a World Heritage Site. Testimony before the SCC’s Hearing Officer demonstrated that an application for a nomination as a World Heritage Site for Jamestown, or the Historic Triangle more generally, has not been filed. SCC, Senior Hearing Officer’s Report at 123; Rebuttal Testimony of Dr. Martin L. Wolverton at 17. As Dr. Wolverton explained, even assuming an application had been submitted for Jamestown/Historic Triangle, the site would have to be selected to the United States’ Tentative List.¹⁵ From that list, the United States can nominate up to two sites for consideration as World Heritage Sites by UNSECO, but it does not have to. The last time the Tentative List was updated was 2008, and it will not be updated again until 2018. Being on the Tentative List does not guarantee a site will ever be nominated. Further, since 1994, the United States has only made two nominations, thus many properties currently on the Tentative List are likely to remain there when the list is updated in 2018.¹⁶ Finally, in the selection process, UNESCO gives priority to countries’ nominations that have less number of sites designated as World Heritage Sites. Because the United States has 21 such sites, selection of a United States nominated site is statistically unlikely. Rebuttal Testimony of Dr. Martin L. Wolverton at 13-18.

The foregoing makes clear that, just from a procedural perspective, the chance of the Historic Triangle becoming a World Heritage Site is statistically very low. Even assessing its chances

¹⁵ UNESCO, Tentative Lists at <http://whc.unesco.org/en/tentativelists/state=us> (last visited Mar. 3, 2016). Neither Jamestown nor the Historic Triangle is on the list.

¹⁶ In July 2016, UNESCO inscribed four new sites on the World Heritage List, none of which were in the United States. UNESCO, Four Sites Inscribed on UNESCO’s World Heritage List, at <http://whc.unesco.org/en/news/1524> (last visited Aug. 1, 2016). This information provides evidence that the U.S. Tentative list likely will remain unchanged, as none of its current candidate sites were selected by UNESCO.

involves pure speculation. *Id.* at 18. Beyond process, however, the evaluation of visual impacts on Jamestown in the CREA demonstrates that any impact is minimal, and, as discussed below, more than compensated for by the proposed mitigation. In addition, as Dr. Wolverton discussed, the fact that a historic property may be affected by modern intrusions is not a deterrent to selection as a World Heritage Site. For example, five Franciscan Missions (including the Alamo) along the San Antonio River front were selected for the United States' Tentative List, and ultimately designated as a World Heritage Site.¹⁷ *Id.* at 13-14. The Alamo, just one of the five missions, is surrounded by modern development and intrusions, including freeways and an interstate, hotels, commercial and retail establishments, and power lines. Yet, it is a World Heritage Site and remains a highly visited destination. *Id.* at 14. It is highly unlikely that the Project would impede Jamestown's or the Historic Triangle's ability to be selected as a World Heritage Site.

Jamestown Island was listed on the National Register under Criterion A (as the first permanent English settlement and its association with the colonization of Virginia) and under Criterion D (for its archaeological potential). Its character-defining characteristics include its numerous archaeological resources and its significance in history. It retains all seven aspects of integrity. CREA §§ 3.33.2.2, 3.33.2.4; *see* NPS Letter at 6 (also noting that the site has documented significance under Criterion C). Because the Project does not impact Jamestown physically, its integrity of location, association, design, materials, and workmanship are not impacted, and consequently, the reasons it was listed under Criteria A and D are not impacted either. Further, viewing the river is not an important characteristic of Jamestown, although as NPS notes, the relationship of the James River to the history of Jamestown is an important characteristic of Jamestown. NPS Letter at 6. That relationship is not changed by the Project, but the Project could have some impact on the setting and feeling of Jamestown, as recognized above. As noted, however, the Project can only be seen from a very small portion of Jamestown Island (Black Point), and even then the view is at a significant distance, which results in the diminishment of visual contrast to the point of negligibility. When added to the current modern intrusions, the visual condition of the river, and visitor expectations (as well as the fact that the main attraction of the settlement area is in a place that does not have a view of the Project), these facts support the conclusion that any impacts on Jamestown would be minimal. *Id.* § 3.33.2.4.

4. Colonial National Historical Park/Colonial Parkway

Like its assessments of the other historic properties, NPS also ties its evaluation of the severity of impacts from the Project on the Colonial Parkway to what it calls character-defining views of the James River, which it asserts have maintained a Colonial-era character. NPS Letter at 8. Just as noted above, NPS does not consider the many modern intrusions that are visible from the parkway (*e.g.*, the Kingsmill Resort which is adjacent to the east end of the portion of the parkway along the river), or the other considerations regarding potential viewers and their expectations. It also does not provide any analysis or facts regarding what the potential visual impacts might actually be to the average viewer driving along the parkway, or stopped at one of its pull-offs, unlike the CREA. The CREA's line-of-sight and photo analyses demonstrate that the eastern portion of the parkway along the river would have unobstructed views of portions of

¹⁷ UNSECO, San Antonio Missions, at <http://whc.unesco.org/en/list/1466> (last visited Mar. 3, 2016).

the Project in the river (to the extent not blocked by trees and vegetation along the parkway itself) and that as one travels west on the parkway toward Jamestown those views become more and more obstructed by Hog Island until a point at which they are obstructed fully. Even in places along the eastern portion of the parkway, however, the CREA's analysis demonstrates that the closest tower would be over 3.5 miles away, and some would be over 5 miles away. Thus, while perhaps visible, the photo and simulation analyses demonstrate that the view of the towers at those distances is diminished to the point that any visual contrast would be negligible.¹⁸ CREA § 3.33.1.4, App. D.2. Like visual impacts to Jamestown Island, the facts provided by the CREA show that any visual impacts would be minimal at best, and would be most noticeable at night when the blinking lights on the tops of the towers were visible. Those lights, of course, would blend in with all of the lights from the modern intrusions in the area, including those at the Kingsmill Resort, the Surry Nuclear Power Plant, and the aids to navigation on the water. *Id.*

Also like its analysis of Jamestown Island, NPS asserts that consideration must be given to the potential impact on future restorative work along the parkway, in particular re-establishing views over the river by clearing trees and vegetation along the parkway that have grown in over the years. NPS Letter at 8. Specifically, NPS suggests that such work would be "inhibited and likely no longer possible" because it would expose an even broader view of the Project. *Id.* In light of the highly diminished view the Project from the parkway, as discussed above, and the fact that it was NPS' pre-Project decisions regarding vegetative growth that it allowed to obscure intended views in the first instance, it is reasonable to expect that the existence of the Project will have little to no impact on NPS' vegetation clearing decisions. This is supported by the fact that in 2016 NPS cites 2001 documentation stating that, even then, vegetation had grown to obscure intended parkway views, and apparently such vegetation persists today. By allowing intended parkway views to become and remain obstructed by parkway vegetation, NPS' argument that the views are character-defining, or significant or necessary to the property's integrity are not persuasive. The more likely conclusion is that, based on NPS' actions, unintended obstructions to river views from the parkway have not impacted the parkway's integrity, namely the aspects of setting and feeling.

The Colonial Parkway was listed on the National Register under Criterion A (for its association with the early 20th century trends of recreation and conservation, and as example of an early 20th century recreational parkway constructed partially in response to the popularity of recreational "motoring") and under Criterion C (for landscape architecture as an intact example of parkway design and for its architectural features, which reflect the Colonial Revival style utilized during the renovation of Colonial Williamsburg). As NPS notes, one of the defining characteristics of the parkway is the open landscape and views of the James River, particularly in the vicinity of College Creek at the eastern end of this portion of the parkway. As the parkway heads west toward Jamestown, river views become more obscured due to vegetative screening. CREA § 3.33.1.2. The parkway exhibits the integrity of setting, location, feeling, association, design, materials, and workmanship. *Id.* Because the Project does not impact the parkway physically, its integrity of location, association, design, materials, and workmanship are not impacted, and consequently, the reasons it was listed under Criterion A and C are not impacted either (*i.e.*, an association with the early 20th, not 17th, century recreation and conservation

¹⁸ The additional in-river photos and simulations provided by Dominion in May 2016 that were incorporated in the updated Photo Simulation Overview provide further confirmation of that fact.

trends, and for its architectural features). Nevertheless, because viewing the river is an important characteristic of the parkway, its setting and feeling are impacted by the Project. As discussed above, however, these views are only from a portion of this part of the parkway and are at a distance that diminishes the visual contrast significantly. When added to the current modern intrusions, the visual condition of the river, and visitor expectations, these facts support the conclusion that any impacts on the parkway would be minimal. *Id.* § 3.33.1.4.

5. Take-Aways Regarding the NPS Letter

Unlike the CREA and related impacts assessment materials, the NPS assessment of impacts in the NPS Letter lacks for factual details and specificity about potential adverse effects on the historic properties at issue, and on a landscape basis. It does not reflect a rigorous, multi-media/multi-faceted approach aimed at providing evidence of what the impacts on the ground (and water) might actually entail. Instead, it is long on sweeping statements regarding the national and historic importance of the historic properties at issue. There is no disagreement about the national and historic importance of this area. The Section 106 process and analysis, however, does not change based on the relative importance of the historic properties at issue.¹⁹

Perhaps most importantly, though, is that NPS' conclusions regarding the severity of impacts are based on what appears to be a myopic view of the current character of James River; NPS' assessment does not take into account the realities of the modern intrusions on the landscape, and the fact that these realities do not seem to have impacted people's (namely tourists') perception of the historic properties' ability to retain their historic integrity, or their desire to visit the sites.²⁰ Its conclusions also appear to give no consideration of what the Project actually will look like to viewers from key observation points, as the NPS Guidance states is important. As discussed, with the exception of the crossing itself, the Project will be multiple miles from potential viewers. The line of site analyses and photos and simulations that inform the CREA's analysis were corroborated by views of the existing transmission line at the James River Bridge, and they show that most of the views of the Project from the historic properties assessed in the NPS Letter diminish to the point of no visual contrast. *See also* Photo Simulation Overview and Corps Email, *supra* note 7. Even for vantage points closer to the Project, the impact on the view is minimal.

Ultimately, as the SHPO guidance confirms, because visual impacts cannot be quantitatively measured effectively and for the most part do not harm historic properties in a physical manner, assessing them relies primarily on subjective analysis. SHPO Guidance at 2.²¹ The subjective nature of the analysis, however, can be minimized by understanding the reasons why historic properties are significant, and by analyzing specific impacts to the aspects of their integrity. *Id.*

¹⁹ Of course, we note that the requirements of NHPA § 110(f) must be met with respect to properties that are designated as National Historic Landmarks, as has been the case here with respect to Carter's Grove.

²⁰ *See* Heritage Tourism Assessment at 6-7.

²¹ This is consistent with NPS' statements in its analysis of visual impacts regarding the Susquehanna to Roseland 500kV Electric Transmission Line. NPS, Susquehanna to Roseland 500kV Electric Transmission Line Right-of-Way and Special Use Permit Final Environmental Impact Statement at Ch. 4, at 588-89 (Aug. 2012) ("Visual quality is by nature subjective."; "visual quality is inherently subjective"; while NPS used a Federal Highway Administration tool to attempt to reduce the subjectivity, it acknowledged that the analysis remains subjective).

The NPS assessment of severity of the Historic District/CAJO Trail, Jamestown Island, and Colonial Parkway certainly evinces an understanding of why this area and these properties are important historically, but stops short of performing a detailed analysis of how the Project specifically will impact each property and its integrity, and the landscape, as the CREA does. It also fails to consider the current context of these properties. Instead, the NPS assessment substitutes conclusory opinions of the severity of potential impacts. While the CREA's severity conclusions also constitute opinions, they are opinions informed by the nature of the historic property, why it is listed on or eligible for listing on the National Register, what aspects of integrity are at issue, and how the property and those aspects are impacted based on a multi-media/multi-faceted approach using photos, simulations, site visits, and other record evidence, including consideration of the current context in which the historic properties exist.

C. Severity Assessments for the Other Historic Properties

While not the subject of the NPS Letter, for completeness we note the severity of impacts on the other historic properties for which an adverse effect was determined, as set out in the CREA, among other documents. In addition, a review of the photos and simulations in the record (including the additional in-river photos and simulations included in the updated Photo Simulation Overview confirm the assessments summarized below.

1. Carter's Grove

Carter's Grove was listed on the National Register in 1969 and specified as a National Historic Landmark (NHL) in 1970 for its significance under Criterion C (architecture). Its defining elements included its well-preserved architectural features indicative of its period of significance dating from the 18th through the early 20th century. In light of the significant archaeological resources are located within the grounds of the property, it may also be eligible for listing under Criterion D for information potential. Carter's Grove, including its surrounding grounds, appear to have retained integrity with respect to all seven aspects of integrity.

The Project will not physically impact Carter's Grove, and thus, will have no impact on its architectural or archeological values and elements for which it was listed on the National Register or selected as an NHL. Thus, its integrity of location, association, design, materials, and workmanship are not impacted. Its integrity regarding setting and feeling, however, would be adversely affected by visual impacts. From the main house, a key observation point for potential visitors, due to existing vegetation, there is a limited view of some or all of a few transmission line towers as they emerge from around Hog Island. The closest tower is approximately 1.3 miles away. As compared to the views from Black Point, the two visible towers at Carter's Grove are more visible, but still lack a marked and significant contrast with the landscape given the backdrop of the blue sky and blue water and the weathered galvanized structures. From the river shoreline, another key observation point that is closest to the transmission line, many more towers are visible, although they are still at a minimal distance of over 1.3 miles away and would blend into the background as they get farther away, but likely not to the point of a complete loss of contrast until they were 3.5 to 4 miles away. Like Historic Jamestowne to Jamestown Island, the main house at Carter's Grove would be the likely focal point for visitors, although it is reasonable to assume that some would walk down the shoreline

to see the view. It also is fair to consider the fact that Carter's Grove has been closed to public since 2003, and privately owned since 2007, and it is not clear when or if it will be reopened. Surry Nuclear Power Plant is visible from this site, and other modern intrusions are visible, included a power line and convenience store, on the way into the property. *Id.* These facts tend to diminish the effects of any visual impacts. SCC, Hearing Officer's Report at 140. Under these circumstances, it is reasonable to conclude that the visual impact on the historic property is moderate at best. CREA § 3.9.

2. Archeological Site 44JC0662

Site 44JC0662 is a single dwelling dating from the 18th to 19th century that is associated with the Bailey family, a low- to middle-income slave-holding family in James City County. It was determined to be eligible for listing on the National Register under Criterion D for its ability to yield information important in history. In particular, the site could offer important comparative material which could be utilized by archaeologists studying 19th century farmsteads occupied by low- to middle-income whites and African-Americans, as well as offer insight into the growing notion that historical archaeology is a study of capitalism and how living conditions, material culture, and social spaces were influenced by the creation and maintenance of social inequality. This archeological site will be directly and physically impacted by the Project, specifically the Skiffes Creek Switching Station. These impacts will destroy the aspects of the site that make it eligible for inclusion on the National Register. The severity of this impact can be considered major. CREA § 4.2.1.

3. Hog Island WMA

The Hog Island Wildlife Management Area has been determined potentially eligible for listing on the National Register under Criterion A as one of the earliest settlements outside of Jamestown and under Criterion D for its archaeological potential to yield important information in prehistory and history. Specifically, Hog Island's primary significance lies in its relatively unaltered setting as a landscape associated with Colonial Period settlement along the James River and its potential to yield significant information about the past based on the presence of archeological sites. There will be no physical impacts from the Project on Hog Island, and thus, any impacts would be visual. Line of sight modeling and photographs show that the Project would be visible in the river from the shoreline, but that the inland areas of Hog Island would be shielded from the Project given current vegetation, although the tops of some towers may be visible above the tree lines. The distance to many of the river-based towers would diminish the visual impacts considerably, however, not likely to the point of losing all visual contrast. Access to Hog Island is by a road controlled by the Surry Nuclear Power Plant, which is separated from Hog Island by a large treed buffer. Under these circumstances, it is reasonable to conclude that the visual impact on the historic property is moderate, at best, but more likely minimal given that Hog Island's importance lies in its ability to yield significant archeological information, and its setting and landscapes generally will be unaltered unless one is on the southern and eastern shoreline of the property. CREA § 3.19.

4. Battle of Yorktown

This site consists of over 69,000 acres that constitute portions of Yorktown and the Yorktown Battlefield. Large portions of the site have been compromised by modern intrusions and development, including the I-64 corridor, numerous subdivisions, and commercial development. There are, however, portions of the battlefield that have been preserved within the Newport News Park and the NPS property, Yorktown National Battlefield, and portions of the Colonial National Historical Park. The portions of the battlefield within the APE retain little integrity of setting because of the numerous modern intrusions to the landscape, particularly for the sections within the 230 kV transmission line segment, which is within an existing right-of-way. The site nevertheless retains integrity of location and association related to the Civil War (Criterion A), which would not be compromised by the Project. In addition, the many archeological sites within the resources have been identified and will not be impacted directly by the Project. Thus, the Project also should not present more than a minimal adverse effect to the resource's significance and integrity with respect to Criterion D. Visual impacts from the Project also are considered minimal, in light of the existing utility corridor and numerous modern intrusions. Thus, any impacts to the site are expected to be minimal. CREA § 3.34.

5. Fort Crafford

The Fort Crafford site is the earthworks of a former fort from the Civil War. It was listed as part of a larger site at Joint Base Eustis, where it is located, and likely was considered significant under Criterion A as an example of a Civil War period strategically placed earthwork and under Criterion D for its potential to yield archaeological information about the Civil War period and fort construction. The site's integrity of feeling has been diminished by the presence of the nearby military installation, however, the Fort's location on a small wooded peninsula are reminiscent of the landscape and feeling of the mid-nineteenth century. The site is set back from the riverbank and generally is shielded by a buffer of trees that appear to average approximately 60 feet in height. The resource retains integrity of location, workmanship, design, and setting. The Project would not affect the location or the integrity of design, workmanship, and materials because there would be no construction or activity which would alter these elements of the resource. Line-of-sight modeling, however, suggests that a small portion of the river-crossing part of the Project may be visible through the treed buffer, looking north and northwest upriver. Photos from this area show the northern view to be very obstructed, but the northwest view possible. At night, lights from the Project might be seen from the site, but those would blend with the several other visual obstructions behind the Project (*e.g.*, from Surry Power Station), between the site and the Project (lighted buoys). Other sources of light coming from Joint Base Eustis in the vicinity, and from sites along the eastern James River shoreline (*e.g.*, Kingsmill Resort) also can be seen from the site. The visual impacts will not compromise the site's integrity of location, workmanship, and design related to Criterion A or D, the reasons it is considered eligible for listing on the National Register. The visual impacts may impact the site's setting and feeling, although the site's feeling already is diminished, as noted, and any visual impacts at a distance of nearly four miles would be severely diminished to the point of very little visual contrast. Thus, any impacts to the site are expected to be minimal. CREA § 3.28.