

September 9, 2022

Cynthia Moses-Nedd, Chair
Prince William County Planning Commission
5 County Complex Court, Suite 210
Prince William, VA 22192

Re: Comprehensive Plan Amendment #CPA2021-00004 – PW Digital Gateway

Dear Chair Moses-Nedd:

On behalf of QTS Data Centers (“**QTS**”) and Compass Data Centers (“**Compass**”, together with QTS, the “**Applicants**”), we write to provide our summary observations on the Comprehensive Plan Amendment #CPA2021-00004, PW Digital Gateway (the “**CPA**”), which is set to go before the Planning Commission (the “**Commission**”) for a public hearing on September 14, 2022. The Applicants are contract purchasers of approximately 1,650 acres of land within the 2,133-acre CPA area (the “**DG Corridor**”). Both companies filed rezoning applications earlier this year to permit data center development, but have delayed processing them to await approval of the CPA, with its specific policies and guidelines.

We appreciate the substantial time and effort expended by County Staff to develop the CPA recommendations, which offer an opportunity to transform Prince William County’s (the “**County**”) economic future in an environmentally responsible way. We look forward to the Commission’s consideration of the CPA and our comments below.

A. Purpose of the CPA

The fundamental question before the Commission is whether data centers are an appropriate land use in the DG Corridor. We respectfully submit that they are.

The DG Corridor already is traversed by both 230kV and 500kV high-voltage transmission lines atop lattice towers that rise 115’ in the air. The power lines and associated towers cross and abut the Manassas National Battlefield Park and convey electricity north to Loudoun County and large portions of the Northeast Corridor. The lines burden the northwest corner of the County but presently offer little economic or social return. If adopted, the CPA would change that dynamic and permit the County to share in the benefits currently available to Loudoun County and others by allowing data centers to locate near and tap into this valuable resource - these transmission lines. As you know, data centers contribute significant tax dollars and use very few services. The resultant revenue stream can be used by the County to provide much-needed support for other, important County objectives, including education, affordable housing and mental health services, among others.

Importantly, the CPA is not an implementation document but, rather, offers a set of guidelines and policy objectives against which future rezoning applications are to be judged and evaluated. To maximize the benefit of the CPA, however, the policies should be clear and unambiguous as to the expectations on future rezoning applicants. At the same time, the CPA should be flexible enough so that none of the recommendations are unrealistic or pose an unattainable expectation. As currently written, there are number of recommendations within the CPA that we are concerned are unrealistic and pose existential threats (insurmountable challenges) to realizing what the CPA is intended to promote. As such, the Applicants’ proposed changes seek to provide better, more realistic guidance at the time of rezoning review and bring the CPA into closer alignment with the Board’s directive.

B. Items for Planning Commission Consideration

The main items that we contend need further clarification from the Planning Commission include the following:

1. Two Unwarranted Designations of Land as Parks and Open Space
2. Confusing Policies on Stormwater Management and Stormwater Reuse
3. One-Size-Fits-All Substation Designs
4. Premature Designation of Two Historic Sites
5. 60MPH Crossover Spacing on a Local Road - Pageland Lane
6. Inappropriate Reference to Study a Future I-66 Connection

Our comments and suggested CPA changes to each of the above items, which can be found in **Exhibit A**, are summarized as follows:

1. Two Unwarranted Designations of Land as Parks and Open Space

The CPA envisions approximately 800 acres of permanent open space (parkland, buffers, protected Environmental Resource areas, and Pageland Lane streetscape areas) and 1,330 acres of developable area within the DG Corridor. More specifically, 370 acres of the 800 acres of permanent open space are designated as future parkland, which adds to the 5,540 acres of parkland already existing within Catharpin Park, Conway Robinson State Forest, and the Manassas National Battlefield Park. The Applicants generally support these designations.

Nevertheless, there are two areas presently designated as parks and open space that offer little environmental or recreational benefit and are in direct conflict with the intent of the CPA to create a connected technology corridor and an objective to collocate existing electric transmission lines with new facilities and substations wherever possible.

Wildlife Corridor North of Artemus Road

Figures 5 and 13 of the CPA designate a north-south portion of the area north of Artemus Road as a “wildlife corridor” to be preserved. The location of the proposed wildlife corridor is artificial and based on existing property lines separating one home site from another. The east side of the shared property line has been farmed, while the west side has not. That is the principal difference between them. There are no environmental or historical resources within the proposed wildlife corridor. Nor is it the most desirable habitat for wildlife, which was confirmed by a study prepared by Wetlands Studies and Solutions, Inc. (“WSSI”), and submitted to County Staff (**Exhibit B**). WSSI concluded that the best and most viable wildlife corridors are those that follow the stream valleys because they provide suitable cover, food, and water for target species, while connecting various habitat cores. By contrast, the north-south corridor through the CPA’s Northern District is not considered a core wildlife corridor because it is fragmented by driveways, houses and related residential development, and other changes to the natural environment caused by human activities.

Compass’s assemblage includes parcels on both the east and west sides of the proposed wildlife corridor. It fully expects to consolidate these lots as part of a future site/subdivision plan. Unless the wildlife corridor designation is removed from Figures 5 and 13 of the CPA, however, it will severely diminish the development potential of the CPA area north of Artemus Road, make it nearly impossible to achieve the economic benefits expected from the DG Corridor as a whole, and, as a result, may prevent Compass from moving forward with its Application. Accordingly, we respectfully request that

the north-south portion of the wildlife corridor be removed from Figures 5 and 13 and that the specific language pertaining to the recommended corridor widths be removed from the draft CPA text as shown in Exhibit A.

Modify the Open Space Designation East of Power Lines and Pageland Lane

Figures 5 and 13 also delineate a 60+-acre area to the east of the power lines in the Southern District as future parks and open space. The Applicants recommend that this “Open Space” designation be amended by approximately 15-20 acres to permit the land directly abutting the eastern side of the existing high-voltage transmission lines to be used for supporting uses, structures and electrical facilities (but not data centers).

Our reasoning for this refinement is simple: (1) the Manassas National Battlefield Park has not asked QTS to preclude all development in this area; (2) the Manassas National Battlefield Park has prioritized berming, viewshed studies and reforestation in the open field areas as the appropriate mitigation measures, rather than on complete bans on development east of the transmission lines; and (3) flexibility is needed to locate electrical infrastructure, storm water management ponds, and other support facilities as close to the existing transmission lines as possible.

Data center development in the Southern District already is limited to only 45% of its land area, reduced heights and more conservative FAR. These limitations ensure that sensitive environmental and cultural resources will not be adversely impacted. All Environmental Resource (“ER”) designated lands within the Southern District will be preserved as open space, and 285 of the 525 acres (55%) located within the Southern District are planned to be public or private open space. ER in this area will not be impaired or developed as data centers.

A total ban on any use of the land east of the power lines offers no additional, usable open space. QTS has committed to preserving and enhancing the remaining 40+ acres of land contiguous to the Battlefield. For these reasons, we request that Figures 5 and 13 be updated to acknowledge that some 15-20 acres abutting the transmission lines may be used in the limited and defined ways suggested here, with a reaffirmation of no data centers east of the Dominion Transmission Lines and some 40+ acres permanently preserved as open space.

2. Confusing Policies on Stormwater Management and Stormwater Reuse

A large portion of the DG Corridor currently contains open land, which routinely is treated with pesticides, fertilizers, and other chemicals. The area also contains over 100 long-standing residential septic systems that easily can fail and pollute the County’s nearby waterways. Nutrient and manure runoff also is uncontrolled, reflective of the current, by-right Agricultural/Estate zoning. Additionally, three nearby golf courses that drain to Little Bull Run are treated with herbicides and insecticides. Should the CPA be approved by the Board, and rezoning applications later approved, there will be significantly more, site-specific review and regulation of storm runoff from the DG Corridor than occurs today.

Unfortunately, as drafted, CPA Policy DGGI 1.8 contains a confusing and unworkable stormwater management standard that takes these new regulations one step too far and will be impossible to achieve during implementation. Indeed, draft Policy DGGI 1.8 encourages data center developments to detain and retain a substantial amount of storm runoff onsite, without release of storm runoff downstream. Respectfully, “no net run-off” is neither an achievable nor reasonable standard. The most common way of achieving the proposed standard, where possible, is through (a) infiltration of storm runoff into the

ground, and (b) reuse of storm runoff onsite. Neither of these options are available in the DG Corridor, as more fully explained below.

Due to subsurface geologic conditions (i.e., clay, rock), most of the DG Corridor land area is not conducive to the infiltration of storm runoff. By contrast, areas on the east side of the County, which often have more sand and silt in their soils, are better able to absorb storm runoff, thereby lessening the amount of runoff that leaves a development site. That is why stormwater policies in areas with rock or hard soils focus on reducing (a) the peak *rate* at which storm runoff leaves a development site during storm events, and (b) the amount of pollutants that are released downstream. Reductions in the rate of discharge target downstream erosion, while reductions in pollutants address water quality concerns. Draft Policy DGGI 1.8, however, does not account for the difference in soil types and the presence of subsurface rock in the DG Corridor, this concept of “no net runoff” is an unrealistic performance standard, particularly in this area of Prince William. Worse, an unintended consequence of “no net runoff” is a degradation to the very streams (Little Bull Run, Catharpin) that we all seek to protect – those streams need water to remain healthy. Depriving these important waterways of a meaningful flow harms the wildlife, water quality and vitality of the very streams we treasure.

Relatedly, many new data centers use dramatically improved, alternative cooling systems – an exponential reduction in water usage compared to older open/evaporative tower water-cooling systems. More specifically, both Applicants utilize closed-loop, hybrid, fan cooling, or zero-water cooling systems within their data center facilities, which reduce dramatically the use of public water and sewer service. By way of example, a closed-loop data center of 250,000 square feet often uses the equivalent water and sewer of 2–3 single-family homes. As a result, the data centers will have little ability to reuse storm runoff captured onsite. Nor will data centers in the DG Corridor contribute untreated or uncontrolled pollutants into the watershed. If refrigerant is used in water cooled systems, it is maintained in a separated, sealed line and only opened on a periodic basis for a controlled flushing and recycling process. This flushed refrigerant is transferred via receptacle trucks for proper state and federal regulated disposal. Despite many misrepresentations to the contrary, it is important to empathize that there is no release into groundwater, waterways or the sewer system.

As written, DGGI 1.8 is a product of what we suspect was an incorrect assumption by County Staff that the Applicants would be using stored runoff in an open loop water cooling system. This assumption is incorrect. As such, we propose that Policy DGGI 1.8 be revised as shown in **Exhibit A** to account for the difference in subsurface conditions and to focus on reducing the peak rate of discharge and achieving water quality outcomes equivalent to “good, forested conditions.” Under this approach, stormwater facilities for sites that currently are forested would be designed to release peak flow storm runoff at a rate no greater than its present (forested) condition, while stormwater facilities for sites that previously have been farmed or developed with housing units will be designed to return the rate of storm runoff to that which existed prior to the site being developed and/or farmed. The same would be true for the quality of storm runoff that is released downstream. Both of these standards exceed current state and County regulations for the treatment of storm runoff and are achievable. By contrast, the standard currently set forth in DGGI 1.8 is not.

3. One-Size-Fits-All Substation Designs

Much has been made by members of the public in opposition to the CPA of the potential viewshed impacts of data center development on Manassas National Battlefield Park and the Heritage Hunt community. In response to this concern, the Applicants submitted to County Staff evidence of the existing buffers, topography, and distance between each of these locations and the boundaries of the

DG Corridor, which decisively display a minimal impact, if any, on the viewsheds from Manassas National Battlefield Park and the Heritage Hunt community.

As shown in **Exhibit C**, there is upwards of 1,000 feet of distance (close to three football fields in length) and very significant, mature and tall forested areas between the nearest Heritage Hunt residence and any future data center that could be developed pursuant to the CPA policies and guidance. This is because Heritage Hunt and the developable portions of the DG Corridor are separated by Little Bull Run and/or Catharpin Creek, both of which have acres upon acres of forested land and a ridgeline that will remain undisturbed. And that does not yet take into account additional vegetative screening that may be provided by the Applicants during the rezoning process.

Similarly, the existing transmission lines and associated lattice towers that cross and abut the Manassas National Battlefield Park are approximately 115 feet in height and much taller than any potential data center or supporting infrastructure that would be developed in the DG Corridor. The materials provided to County Staff in **Exhibit C** show that any proposed development adjacent to the Park will be less intrusive and visible than the transmission lines because of existing foliage and forested land that is to remain undisturbed.

Notwithstanding this information, however, draft Policy DGCD 1.10 encourages all substations built in the DG Corridor to be designed using enhanced screening and design techniques, regardless of their location in the DG Corridor. The challenge with this language, as drafted, is that it does not distinguish between substations located internal to the DG Corridor, where they would be screened by one or more data center buildings, and substations that are or may be visible from the perimeter of the DG Corridor. Additionally, the draft language fails to take into account that NOVEC and/or Dominion Power will construct and own the substations and may not agree to the recommended screening techniques for reasons of cost, maintenance or other considerations. In light of these concerns, the Applicants suggest in **Exhibit A** revisions to Policy DGCD 1.10 to promote the screening of substations based on their location and visibility to adjacent uses, rather than through a one-size-fits all approach.

4. Premature Designation of Two Historic Sites

The Applicants are committed to preserving and protecting the historic resources located within the DG Corridor as recommended within the CPA draft text. However, DGCR 1.8, as currently written, unreasonably and prematurely assumes and concludes that the modernized Pageland II complex (which has been deemed ineligible for listing on the NRHP) and an alleged, as-never-documented, unlocated mass burial site should be preserved.

Rather than put the cart before the horse, the Applicants propose language in **Exhibit A** to require a detailed evaluation of each of the identified elements to determine whether they exist and, if so, how best to honor or preserve them. Absent such an analysis, the CPA essentially proposes to preserve an unproven allegation or unsubstantiated memory, rather than an actual resource.

5. 60MPH Crossover Spacing on a Local Road - Pageland Lane

Draft Policy DGM 1.3 recommends crossover distances for new entrances/streets along Pageland Lane to be a minimum of 900', and a preferred 1,100', in distance from one to the next. Under VDOT and County standards, this proposed spacing reflects a design speed for an expanded Pageland Lane of 60MPH and greater. By contrast, the stated design speed in the CPA for the widened Pageland Lane is 45MPH, which according to VDOT and County standards only requires intersection spacing between 650' and 800'. For reference, the County's Design and Construction Standards Manual ("**DCSM**"),

copied below, explicitly shows that the minimum distance of 900 feet is best used when the road design speeds are 60MPH, not 45MPH as is the case with Pageland Lane.

Design Speed mph	Minimum Distance Between Crossovers feet	Desirable Distance Between Crossovers feet
35	500	600
40	600	700
45	650	800
50	700	900
55	800	1,000
60	900	1,100

Although not explicitly stated, the CPA’s proposed intersection spacing of 900’ to 1,100’ opens the door for an expanded Pageland Lane to someday be converted into a limited-access, north-south parkway/bypass with speeds at or above 60MPH, rather than to remain a local collector road with speeds capped at or around 45MPH. Given the information above, the Applicants request (as shown in **Exhibit A**) that the language of DGM 1.3 be changed to align with the County’s standards for a 45MPH road. Further, the Applicants note that any specific derivations from VDOT and County standards are more appropriately addressed during rezoning review, rather than dictated in a comprehensive plan or comprehensive plan amendment.

6. Inappropriate Reference to Study a Future I-66 Connection

For reasons unclear to the Applicants, the County has included in draft Policy DGM 1.11 a recommendation to analyze a connection from Pageland Lane to I-66 and Route 234. The Applicants request that this language be deleted in its entirety from the CPA, as it is neither related to nor required by the Prince William Digital Gateway CPA. This recommendation concerns traffic and roads outside of the CPA area and should be deleted from the CPA because it is contrary to Board directive #22-08 from March 1, 2022.

C. Additional Items Meriting Planning Commission Examination

In addition to the requested changes above, the Applicants have included in **Exhibit D** further requested refinements and updates designed to bring the CPA text into alignment with the intent and purpose of the CPA – to be clear and unambiguous, yet flexible and workable as to the expectations of future rezoning applicants proposing to develop data centers within the DG Corridor.

Exhibit D includes suggested revisions from the Applicants in addition to a brief explanation as to the reasoning for each requested change.

D. Conclusion

The Applicants respectfully request that the Planning Commission carefully examine and implement the changes recommended within this letter. The Applicants’ proposed changes bring the CPA into greater alignment with the purpose and intent of the CPA and provide reasonable and workable solutions to recommendations within the CPA which, if adopted as currently drafted will be detrimental to the underlying objectives of this exciting CPA.

Cynthia Moses-Nedd, Chair
September 9, 2022
Page 7

We want to thank the Planning Commission and County Staff for your and their efforts, diligence and professionalism. Should you have any questions or need further information, please don't hesitate to contact Mark Looney at mlooney@cooley.com or 703-456-8652, Jonelle Cameron at jcameron@thelandlawyers.com or 703-680-4664, or Tony Calabrese at antonio.calabrese@dlapiper.com or 703-405-2998.

Sincerely,

Mark C. Looney, Esq.
Counsel for Compass
Cooley LLP

Jonelle M. Cameron, Esq.
Counsel for Compass
Walsh, Colucci, Lubeley & Walsh, P.C.

Antonio J. Calabrese, Esq.
Counsel for QTS
DLA Piper LLP (US)

Cc's: Chris Curtis, Compass Datacenters
Nick Blessing, QTS Data Centers

List of Exhibits and Titles

Exhibit A – Proposed CPA Changes and Justification

Exhibit B – Digital Gateway Wildlife Corridor Assessment Memo

Exhibit C – Viewshed Graphics

Exhibit D – Additional Proposed CPA Changes and Justification

Exhibit A

Proposed CPA Changes and Justification

(The language below reflects the Applicants' proposed changes to the CPA. See the following chart for a redlined breakdown and justification for each change)

1. DGCD 1.10

Substations are encouraged to be located to the interior of proposed development or abutting to the existing high voltage line corridor, when possible, to minimize viewshed impacts. Additionally, substations that are visible to Manassas National Battlefield Park or from surrounding major roadways (Pageland Lane, Sudley Road, Lee Highway) are encouraged to use innovative designs to enhance screening from adjacent non-compatible uses.

2. DGCR 1.8

Evaluate through Phase I and, if warranted, Phase II archeological study the following potential resources in situ (in place): Honeywood Site complex (076-0138; also known as Pageland I); Pageland II complex (076-0137); the Phillips Cemetery; and the Civil War Mass Grave. If warranted, (1) preserve these area(s), (2) work with any interested property owner to consider transferring these resources to an entity or organization that provides for the long-term preservation of these resources and (3) consider allowing access to the public for interpretive programming.

3. DGGI 1.4

Establish and protect the wildlife corridors identified in the Green Infrastructure map. Any shifting or relocation of corridors should ensure effective wildlife movement throughout the Study Area. The Little Bull Run wildlife corridor should extend under a new Pageland Lane bridge.

4. DGGI 1.8

Encourage the use of engineering and design solutions that reduce stormwater runoff and help mitigate downstream flooding, to contain pollutants on site and to reduce downstream erosion. Areas of Reforestation and the incorporation of Best Management Practices ("BMP") and/or Low Impact Development ("LID") facilities should be included with rezonings with the goal of reducing the peak flow rate of runoff to "good-forested condition" on development areas, employing LID practices (such as, but not limited to, cisterns, rain gardens, wet ponds, use of storm water for landscaping/irrigation, bioretention facilities, permeable pavers, filtered strips, tree box filters and other innovative storm water management techniques), along with regional stormwater facilities and other innovative techniques to help achieve these goals.

5. DGM 1.3

Access to development within the Study Area is required to be from Pageland Lane. Access/crossovers should be limited to 650 feet minimum but are encouraged to be 800 feet. Intersections, where possible, should be roundabouts which offer opportunities for interpretive features/amenities such as artillery emplacement or monuments which do not hinder visibility but

contribute to the interpretive history of the area. Roundabouts offer a quieter alternative to vehicles starting and stopping at traffic signals with less light pollution for the Battlefield.

6. DGM 1.11 – DELETE ENTIRELY

7. FIGURE 5

- Remove the “POS” designation from the 15-20 acre portion of the land abutting the eastern side of the electric high voltage line corridor in the “Southern District.”
- Remove the wildlife corridor in the shape of a “T” running north-south down the center of the northern assemblage to the west of Pageland Lane

8. FIGURE 13

- Remove the light green “Open Space” delineation from the 15-20 acre portion of the land abutting the eastern side of the electric high voltage line corridor in the “Southern District.”
- Remove the wildlife corridor in the shape of a “T” running north-south down the center of the northern assemblage to the west of Pageland Lane

CPA SECTION	CPA LANGUAGE	JUSTIFICATION
<p>DGCD 1.10</p>	<p>Substations are encouraged to be located to the interior of proposed development <u>or abutting to the existing high voltage line corridor</u>, when possible, to minimize viewshed impacts. Additionally, substations <u>that are visible to Manassas National Battlefield Park or from surrounding major roadways (Pageland Lane, Sudley Road, Lee Highway)</u> are encouraged to use innovative designs to enhance screening from adjacent <u>non-compatible uses</u>. cultural and residential designated areas such as the use of enhanced architectural screening elements to mimic a structure. Such elements should follow the above architectural standards related to design, color, and reflectivity to promote context sensitive design.</p>	<ul style="list-style-type: none"> • The language as-is does not distinguish between substations located internal to the corridor, where they would be screened by data center buildings, and substations that are visible from the perimeter of the corridor. • NOVEC and/or Dominion Power may not agree to the recommended screening techniques, since they will own and operate the facilities. • Should be more of an aspirational goal instead of a requirement. • Substations are best located close to or abutting the existing HV lines, even if that location is not located interior to the development.
<p>DGCR 1.8</p>	<p><u>Evaluate through Phase I and, if warranted, Phase II archeological study</u> Property owners are encouraged to preserve the following <u>potential</u> resources in situ (in place): Honeywood Site complex (076-0138; also known as Pageland I); Pageland II complex (076-0137); the Phillips Cemetery; and the Civil War Mass Grave. <u>If warranted, (1) preserve these area(s), (2) County staff should</u> work with any interested property owner to <u>help consider</u> transferring these resources to an entity or organization that provides for the long-term preservation of these resources <u>and (3) County staff should work with the property owner to consider</u> allowing access to the public for interpretive programming.</p>	<ul style="list-style-type: none"> • For the mass grave, the only evidence of possible burials are two small soil anomalies – both of which are located within planned open space, which will not be disturbed. • For Pageland II, the original farmhouse has been enlarged (to triple its original size), altered, and modernized to such a great extent that it is ineligible for listing on the National Register of Historic Places. • The proposed language will result in an evaluation during zoning review of what cultural resources should be preserved. The current language concludes that that the modernized Pageland II complex and an undocumented/unlocated mass burial should be preserved.

<p>DGGI 1.4 (See also Figure 5 and Figure 13 below)</p>	<p>Establish and protect the wildlife corridors identified in the Green Infrastructure map. These corridors are encouraged to be 500' in width. Where reduced the corridors should be a minimum of 300' in width. Any shifting or relocation of corridors should ensure effective wildlife movement throughout the Study Area. The Little Bull Run wildlife corridor should extend under a new Pageland Lane bridge.</p>	<ul style="list-style-type: none"> • These proposed widths go well beyond the general RPA buffer widths. • The middle wildlife corridor should be deleted from the CPA recommendation in favor of enhancements to more viable corridors. • The Applicant has submitted analysis confirming that the best and most viable corridors are those that follow the stream valleys because they provide suitable cover, food, and water for target species, while connecting various habitat cores. • By contrast, the middle corridor through the northern assemblage proposed in the draft CPA recommendations is not considered a core wildlife corridor because it is fragmented by driveways, houses and related residential development, and other anthropogenic activities.
<p>DGGI 1.8</p>	<p>Encourage <u>the use of</u> engineering and design solutions that achieve no net reduce stormwater runoff from mean annual precipitation and help mitigate downstream flooding, to contain potential pollutants on site and to reduce downstream erosion. <u>Areas of Reforestation and the incorporation of Best Management Practices (“BMP”) and/or Low Impact Development (“LID”) facilities should be included with rezonings with the goal of reducing the peak flow rate of runoff to “good-forested condition” on development areas, employing LID practices (such as, but not limited to, cisterns, rain gardens, wet ponds, use of storm water for landscaping/irrigation, bioretention facilities, permeable pavers, filtered strips, tree box filters and other innovative storm water management techniques), along with County staff should explore whether</u></p>	<ul style="list-style-type: none"> • Staff language would require detention of the storm runoff onsite, which, from a practical standpoint, is impossible to achieve due to subsurface rock and an inability to infiltrate. • Better approach is to target the peak rate of discharge to prevent downstream erosion and clean storm runoff before it leaves the site. • Proposed standard goes beyond state minimum requirements and would essentially replicate a forested condition post-development, even in areas that were previously developed.

	regional stormwater facilities and other innovative techniques is appropriate to help achieve these goals.	
DGM 1.3	Access to development within the Study Area is required to be from Pageland Lane. Access/crossovers should be limited to 900-650 feet minimum but are encouraged to be 1,100 800 feet. Intersections, where possible, should be roundabouts which offer opportunities for interpretive features/amenities such as artillery emplacement or monuments which do not hinder visibility but contribute to the interpretive history of the area. Roundabouts offer a quieter alternative to vehicles starting and stopping at traffic signals with less light pollution for the Battlefield.	<ul style="list-style-type: none"> • The proposed design speed for Pageland Lane is 45 MPH, which according to VDOT and County standards only requires spacing of 650’ and 800’ respectively. • The Staff’s proposed 900’ and 1,100’ spacing distances are used when roads are designed for speeds 60MPH and greater. • The Staff’s proposal would create a de facto bypass design. • Specific derivations from VDOT and County standards should be addressed during rezoning review rather than in the comprehensive plan.
DGM 1.11	Analyze a connection from Pageland Lane to I-66 and Rte. 234 to provide a direct route to the Study Area and to reduce traffic congestion at the intersection of Rte. 29/Heathcote Blvd./I-66 Ramp and the intersection of Pageland Lane and Rte. 29. It may also allow Rte. 29 between Pageland Lane and University Blvd. to be planned as 4 lanes instead of 6 lanes as currently shown in the Roadway Plan. This connection would allow Sudley Road to be limited to Park traffic only north of Northern Virginia Community College (“NVCC”) and south of Gum Spring Road until a more direct route through either the Manassas Battlefield Bypass or the Rte. 29 Alternate Road is constructed.	<ul style="list-style-type: none"> • This recommendation is not related to or required by the PWDG CPA. • It concerns traffic and roads outside the corridor study area. • It should be deleted from the PWDG corridor study area plan because it is contrary to BOCS directive #22-08 (March 1, 2022).
Figure 5	<ul style="list-style-type: none"> • Remove the “POS” designation from the 15-20 acre portion of the land abutting the eastern side of the electric high voltage line corridor in the “Southern District.” • Remove the wildlife corridor in the shape of a “T” running north-south 	<p><u>Removal of “POS” Delineation on Area East of Power Lines</u></p> <ul style="list-style-type: none"> • The Battlefield has not asked the Applicant to preclude all development in this area.

	<p>down the center of the northern assemblage to the west of Pageland Lane</p>	<ul style="list-style-type: none"> • The Battlefield has been focused on berming, viewshed study and reforestation in the open field areas. • Flexibility in this area is needed to allow electrical infrastructure, substation, and other support facilities in this area. <p><u>Removal of Wildlife Corridor</u></p> <ul style="list-style-type: none"> • The middle wildlife corridor should be deleted from the CPA recommendation in favor of enhancements to more viable corridors • The Applicant has submitted analysis confirming that the best and most viable corridors are those that follow the stream valleys because they provide suitable cover, food, and water for target species, while connecting various habitat cores. • By contrast, the middle corridor through the northern assemblage proposed in the draft CPA recommendations is not considered a core wildlife corridor because it is fragmented by driveways, houses and related residential development, and other changes to the natural environment caused by human activities.
<p>Figure 13</p>	<ul style="list-style-type: none"> • Remove the light green “Open Space” delineation from the 15-20 acre portion of the land abutting the eastern side of the electric high voltage line corridor in the “Southern District.” • Remove the wildlife corridor in the shape of a “T” running north-south down the center of the northern 	<p><u>Removal of “Open Space” Delineation on Area East of Power Lines</u></p> <ul style="list-style-type: none"> • The Battlefield has not asked the Applicant to preclude all development in this area. • The Battlefield has been focused on berming, viewshed

	<p>assemblage to the west of Pageland Lane</p>	<p>study and reforestation in the open field areas.</p> <ul style="list-style-type: none">• Flexibility in this area is needed to allow electrical infrastructure, substation, and other support facilities in this area. <p><u>Removal of Wildlife Corridor</u></p> <ul style="list-style-type: none">• The middle wildlife corridor should be deleted from the CPA recommendation in favor of enhancements to more viable corridors• The Applicant has submitted analysis confirming that the best and most viable corridors are those that follow the stream valleys because they provide suitable cover, food, and water for target species, while connecting various habitat cores.• By contrast, the middle corridor through the northern assemblage proposed in the draft CPA recommendations is not considered a core wildlife corridor because it is fragmented by driveways, houses and related residential development, and other changes to the natural environment caused by human activities.
--	--	--

Exhibit B

Digital Gateway Wildlife Corridor Assessment Memo



MEMORANDUM

TO: Chris Curtis, Compass Datacenters (via email: Ccurtis@compassdatacenters.com)

CC: Benjamin Rosner, WSSI (via email: Brosner@wetlands.com)
Laura Garcia, Compass Datacenters (via email: Lgarcia@compassdatacenters.com)
Brett Collard, Compass Datacenters (via email: Bcollard@compassdatacenters.com)
Mark Looney, Cooley, LLP (via email: Mlooney@cooley.com)
Jonelle Cameron, Walsh Colucci (via email: Jcameron@thelandlawyers.com)

FROM: Alison Robinson, WSSI

DATE: August 8, 2022

RE: H&H Capital Acquisitions – Digital Gateway Wildlife Corridor Assessment Memo
WSSI #32018.01

Introduction

Wetland Studies and Solutions, Inc. (WSSI) has prepared a Wildlife Corridor Assessment for the H&H Capital Acquisitions – Digital Gateway study area. This assessment was conducted to aid in determining the location of existing wildlife corridors which may be retained during the development process. Wildlife corridors are intended to be created or maintained to prevent ecosystems and species populations from becoming isolated, reduce extinction rates, and ultimately increase biodiversity. Virginia’s recent adoption of the Wildlife Corridor Action Plan will direct the Department of Wildlife Resources (DWR), Department of Transportation (VDOT), and Department of Conservation and Recreation (DCR) to develop a Wildlife Corridor Action Plan to connect areas of fragmented wildlife habitats that are isolated by infrastructure or other human activities.

Wildlife Corridor Requirements

Beier and Loe (1992) provide a list of items to consider when evaluating wildlife corridors including identifying the habitat areas the corridor is intended to connect, identifying target species for the corridor, evaluating the relevant needs of each target species, and evaluating how an area will accommodate movement by each target species. As part of this process, it is critical to consider if there is sufficient concealing cover, food, and water within the corridor for the target species to reach the full length of the corridor (i.e., move between habitat areas).

Information Reviewed

To aid in preparing this assessment, the 2015 Virginia Wildlife Action Plan (DWR 2015), Northern Virginia Local Action Plan Summary was reviewed to assist in identifying potential species that would utilize any wildlife corridors within the project area.

Our analysis was prepared using information compiled as GIS data from the following sources:

- Prince William County Digital Data
- DCR Natural Heritage Data Explorer (DCR, 2022)
- Federal Emergency Management Agency (FEMA) 100-year floodplain information
- 2021 aerial imagery from Pictometry®
- Wetland Studies and Solutions, Inc. waters of the U.S. delineation and Preservation Area Site Assessment

Information obtained from DCR’s Natural Heritage Data Explorer (DCR, 2022) included the ConserveVirginia v3.0 dataset (Office of the Governor, 2021), Ecological Cores, and Natural Land Network. ConserveVirginia is a land conservation strategy to identify the highest priority lands for protection and offers deed language to restrict certain land uses and assure management actions for protection of conservation values identified in each category. One small area of identified Agriculture and Forestry category land is located in the southern site. Ecological Cores are large unfragmented cores with at least 100 acres of interior cover. These cores are classified into five categories¹: C1 – Outstanding; C2 – Very High; C3- High; C4 – Moderate; and C5 – General. The potential Ecological Cores found within the study area only fall within the C5 category. The Natural Land Network serves as a connection between the highest priority Ecological Cores (Outstanding (C1) or Very High (C2)) and uses a selection of routes with the least resistance between Ecological Cores. Lower ranked Ecological Cores are also included where possible to provide additional habitat and protection for more sensitive species.

The Natural Land Network bisects the southern study area and encompasses two of the C5 – General Ecological Cores. While these two Cores have been identified as C5 (General) by DCR at a landscape scale, a finer-scale review indicates that they are fragmented by driveways, houses and related residential development, and other anthropogenic activities. Thus, while portions of these areas may still act as corridors, they should not be considered “core” areas themselves.

We utilized this information to identify the existence of potential wildlife corridors (Exhibit A). Areas along streams that were within the field-verified resource protection area (RPA) and FEMA’s 100-year floodplain and extended through the site were included as primary potential wildlife corridors. DCR’s Ecological Cores and Natural Land Network helped to refine secondary habitat corridor areas (i.e., areas that may not have all the requirements for a corridor but could still allow movement between habitats).

¹ The categories are identified/scored as follows, per ConserveVirginia v3.0: “... each core and habitat fragment has been assigned an Ecological Integrity score that rates the relative contribution of that area to ecosystem services such as wildlife and plant habitat, biodiversity conservation, open space, recreation, water resources protection, erosion control, sediment retention, protection from storm and flood damage, crop pollination, and carbon sequestration. In general, larger, more biologically diverse areas are given higher scores. Scores are enhanced if the core or habitat fragment is part of a larger complex of natural lands. Scores also are increased for those cores and habitat fragments that contribute to water quality enhancement.”

The potential primary corridor in Land Bay 5 is adjacent to land east of Pageland Lane that is in an existing conservation easement which extends to the border of Manassas National Battlefield Park. This corridor provides suitable cover, food, and water for target species, while connecting various habitat cores. This potential primary wildlife corridor area west of Pageland Lane to the start of the potential secondary wildlife corridor is only minimally forested and could provide an opportunity for enhancement to further allow movement between habitat areas. The central area of Land Bay 5 was deemed to be a secondary corridor due to fragmentation by roads and housing but could still potentially act as a corridor because it is within an RPA and would remain under any development scenario.

In Land Bay 6, the corridor provides suitable cover, food, and water for target species, while connecting various habitat cores. The potential primary wildlife corridor along the floodplain of Little Bull Run could also provide an enhancement opportunity to allow the floodplain to be converted from agricultural use to forested cover.

Limitations

This report evaluation is based on the reports noted and described above. Our review and memo have been prepared in accordance with generally accepted guidelines. Conclusions presented herein are based upon our review of available information, and/or professional judgement.

We offer no opinion and do not purport to opine on the possible application of various building codes, zoning ordinances, other land use or platting regulations, environmental or health laws and other similar statutes, laws, ordinances, codes and regulations affecting the possible use and occupancy of the H&H Capital Acquisitions Property for the purpose for which it is being used, except as specifically provided above. We make no warranties, either expressed or implied, and our report is not a recommendation to buy, sell, or develop the property.

The foregoing opinions are based on applicable laws, ordinances, and regulations in effect as of the date hereof and should not be construed to be an opinion as to the matters set out herein should such laws, ordinances or regulations be modified, repealed or amended.

Reference Information

Beier, P. and S. Loe. 1992. A checklist for evaluating impacts to wildlife movement corridors. *Wildlife Society Bulletin* 20:434-440.

Office of the Governor, Commonwealth of Virginia, 2021. *ConserveVirginia: Virginia's Land Conservation Strategy, Version 3.0*. Retrieved August 2022: <https://www.dcr.virginia.gov/conservevirginia>

Virginia Department of Conservation and Recreation. 2022. *Natural Heritage Data Explorer*. Retrieved August 2022: <https://vanhde.org/>

H&H Capital Acquisitions – Digital Gateway
August 5, 2022
WSSI #32018.01
Page 4 of 4

Virginia Department of Wildlife Resources. 2015. Virginia's 2015 Wildlife Action Plan. Virginia Department of Game and Inland Fisheries. Retrieved August 2022:
<http://bewildvirginia.org/wildlife-action-plan/pdf/2015-Virginia-Wildlife-Action-Plan.pdf>

L:\32000s\32000\32018.01\Admin\05-ENVR\Wildlife Corridor\32018.01_WCA Memo_rev.docx

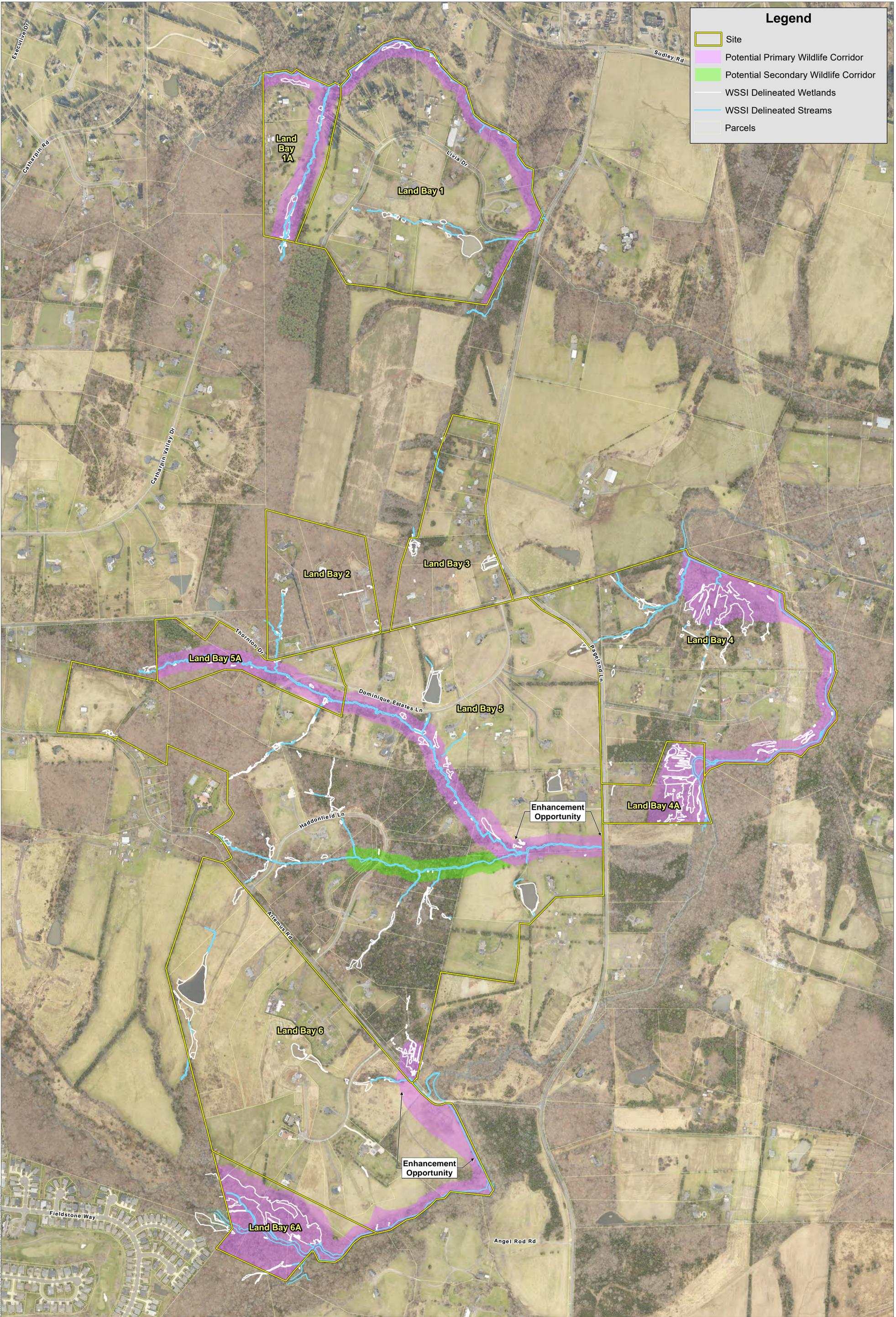


Exhibit C

Viewshed Graphics



Heritage Hunt Viewshed Protection

Aerial taken in 2020.

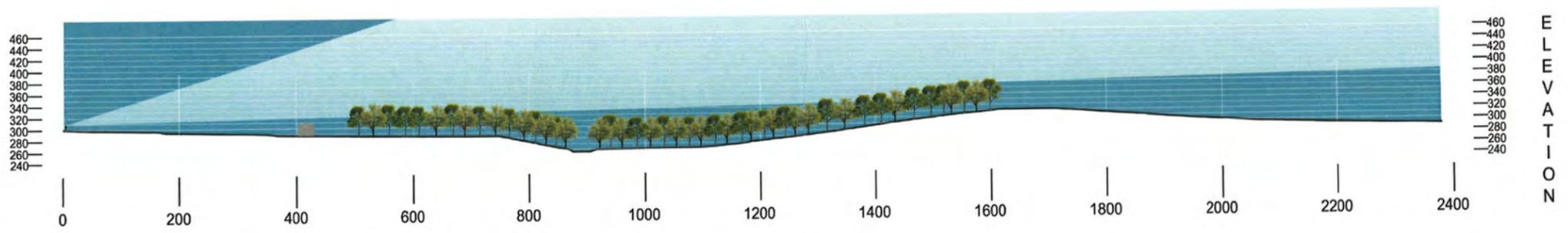
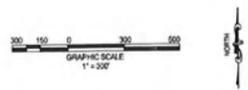


AREA LABEL	VIEW POINT	ELEVATION
①	BRAWNER HOUSE - CEDAR TREE	324 FEET
②	BRAWNER HOUSE - ARTILLERY LINE/UNFINISHED RAILROAD	325 FEET
③	BRAWNER HOUSE - ARTILLERY LINE	327 FEET
④	BRAWNER HOUSE - ENTRANCE DRIVE	309 FEET

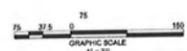


PW DIGITAL GATEWAY
 GAINESVILLE MAGISTERIAL DISTRICT, PRINCE WILLIAM COUNTY, VIRGINIA

CONTEXT PLAN



SITE SECTION



This plan is preliminary in nature and is subject to change based on site surveying and final site engineering.

MARK	DATE	DESCRIPTION

SIGHTLINE EXHIBIT

Manassas National Battlefield Park Viewshed Protection

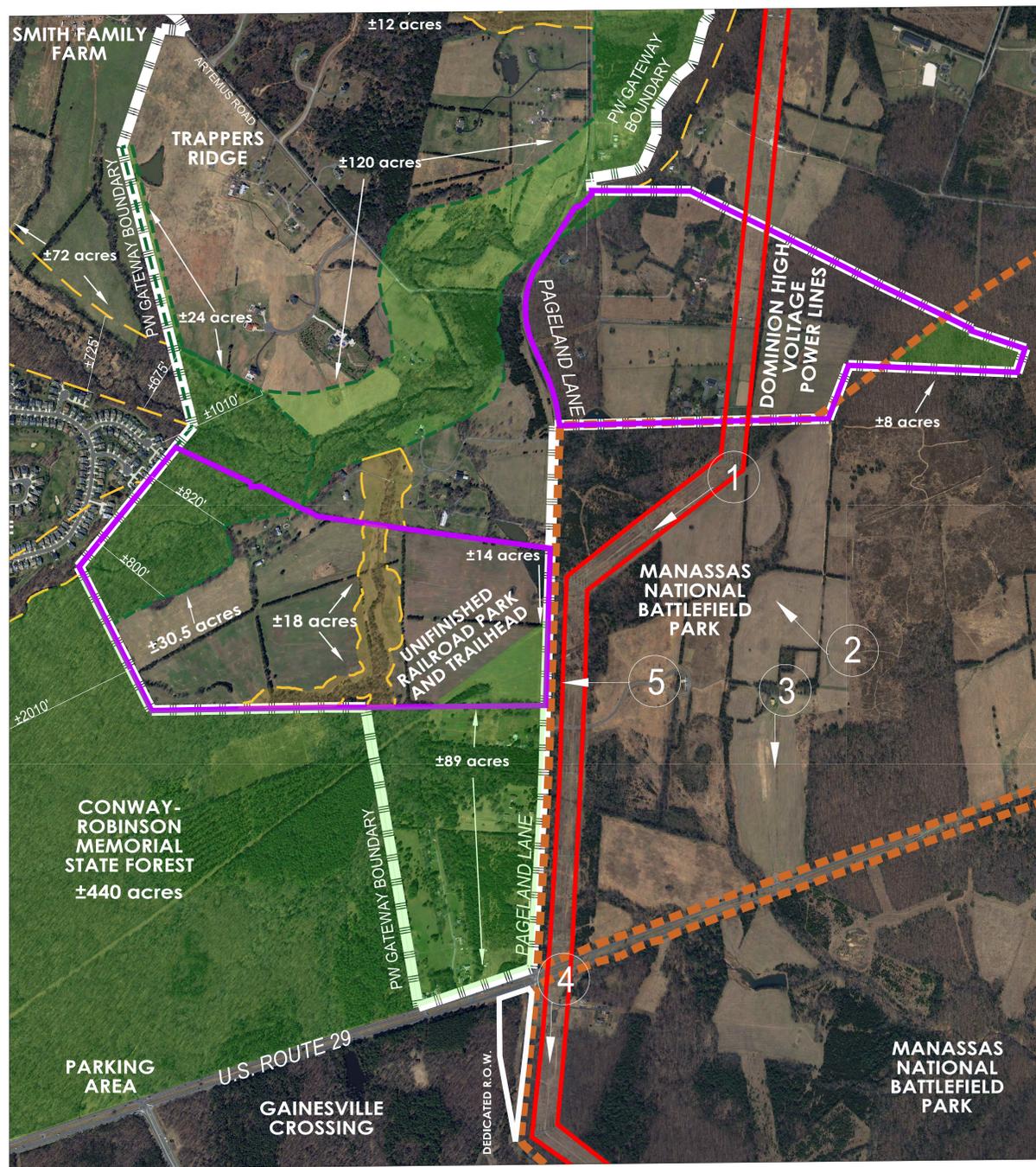
VISUAL IMPACT STUDY - BRAWNER HOUSE - ARTILLERY LINE
PWC DIGITAL GATEWAY



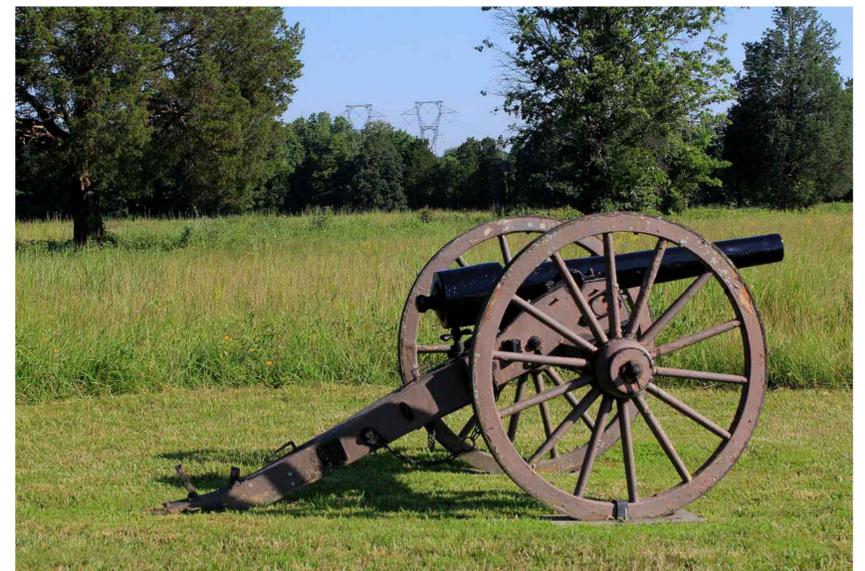
VISUAL IMPACT STUDY - BRAWNER HOUSE - ENTRANCE DRIVE
PWC DIGITAL GATEWAY



VISUAL IMPACT STUDY - BOUNDARY TREE SITE
PWC DIGITAL GATEWAY



1 BRIDLE TRAIL (LOOKING SOUTHWEST)



2 BATTERY HEIGHTS VIEW (LOOKING NORTHWEST)



4 FROM RT. 29 (LOOKING SOUTH)



5 BRAWNER FARM ENTRANCE (LOOKING WEST)



3 BRAWNER HOUSE (LOOKING SOUTH)

MARK	DATE	DESCRIPTION

PROJECT No.: 20143-003.00
 DRAWING No.: 111430
 DATE: 08/02/2022
 SCALE: SEE SHEET
 DESIGN: GB
 DRAWN: GB, CL
 CHECKED:
 SHEET TITLE:

VIEWS FROM BRAWNER FARM

Exhibit D

Additional Proposed CPA Changes and Justification

1. DGCD 1.1 –

Require generalized development plans and master zoning plans submitted with applications for rezonings, special use permits, and public facilities to include ~~limits of disturbance, site layouts, colored architectural elevations, and conceptual~~ illustrative site layouts, along with a commitment to adhere to the adopted and design guidelines. Data centers visible from Manassas National Battlefield Park also should demonstrate considerations which show how the proposed development ~~would~~ implements context-sensitive design ~~that align with DGCR 1.15 for all structures visible to adjacent cultural designated areas.~~

- ***NOTE: THE PROPOSED CHANGES ABOVE REQUESTS GREATER FLEXIBILITY IN WHAT MATERIALS SHOULD BE PROVIDED IN CONJUNCTION WITH FUTURE REZONING APPLICATIONS.**

2. DGCD 1.2 –

Require ~~line-of-sight~~ or comparable exhibits for all portions of a development proposal which border adjacent incompatible uses, and historic viewsheds.

- ***NOTE: THERE ARE OTHER TYPES OF EXHIBITS/METHODS THAT MAY BE UTILIZED TO CAPTURE VIEWSHED IMPACTS TO SURROUNDING USES AND AREAS. THE APPLICANTS SIMPLY DESIRE TO REFLECT THE ABILITY TO USE ALTERNATIVE METHODS WITH THIS PROPOSED LANGUAGE.**

3. DGCD 1.6 –

Encourage Proffer design guidelines for landscaping, ~~reforestation,~~ signage, and architectural standards for data centers ~~sites~~ visible from incompatible uses, such as abutting residential uses and Manassas Battlefield Park and public right of way along Pageland Lane. These guidelines should recognize, complement, and reflect the nearby historic and natural resources in a manner which creates a unique sense of place.

- ***NOTE: DESIGN GUIDELINES ARE TYPICALLY INCLUDED IN PROFFERS DURING THE REZONING PROCESS. THIS PROPOSED CHANGE REFLECTS THAT.**

4. DGCD 1.7 –

All rooftop mechanical equipment should be screened when visible from adjacent ~~cultural, residential, and agricultural designated areas and~~ public rights of way, residential areas and the Manassas National Battlefield Park and incompatible uses. Where appropriate and when visible from these three areas, ~~Ground level~~ ground level mechanical equipment not screened by a principal building, topography or vegetation ~~and when visible from adjacent cultural, residential, and agricultural designated areas and public rights of way~~ should be screened by a visually solid fence, screen wall or panel, or other visually solid screen that is constructed with materials and colors compatible with those used in the exterior construction of the principal building.

- ***NOTE: THIS REQUIREMENT SHOULD NOT APPLY IF THE MECHANICAL EQUIPMENT IS INTERNAL AND ONLY FACES OTHER DATA CENTERS AND CANNOT BE SEEN FROM THE RIGHT-OF-WAY. A LOT OF TIMES THE YARDS FACE EACH OTHER AND ARE INTERNAL TO BUILDINGS.**

5. DGCR 1.1 –

County staff should require rezoning, special use permit, and public facility review applicants to provide detailed viewshed analyses to ensure accurate evaluation of potential visual impacts from the proposed development to significant historic viewsheds and to help ensure that any visual impacts are appropriately addressed. These analyses include, but are not limited to, topographic, LIDAR-assisted line of sight, digital imaging, drone visual horizon tests, augmented reality digital imaging, or other appropriate techniques and technologies determined by County staff, in consultation with Manassas National Battlefield Park, where appropriate. These analyses should identify key observer points, in consultation with the Planning Director or their designee and Manassas National Battlefield Park staff, to use in the viewshed analysis.

- ***NOTE: ALTHOUGH SOME MAY BE NECESSARY, ALL OF THE LISTED ITEMS ARE NOT NECESSARY. WHAT SHOULD BE REQUIRED FOR VIEWSHED ANALYSIS SHOULD BE DETERMINED ON A CASE-BY-CASE BASIS, WHICH IS WHY THE APPLICANTS REQUEST THAT “WHERE APPROPRIATE” BE ADDED TO THE LANGUAGE.**

6. DGCR 1.14 –

Prepare an interpretative plan that includes elements such as, but not limited to: (i) historical markers and other interpretative media in areas of public access; (ii) a self-guided brochure for the trail system incorporating interpretation of historic resources along the trail; (iii) interpretative kiosks in the two proposed parks in this section of the Comprehensive Plan; and (iv) digital media (including augmented reality). The interpretative plan shall be developed ~~in consultation with the Planning Director, or their designee, the County’s Office of Historic Preservation, the Manassas National Battlefield Park and shall be submitted within one (1) year of the first submission of the first rezoning application approval or at the time of the first site plan is submitted and submitted and approved during the rezoning, and~~ thereafter, each applicable site plan should include those elements of the interpretative plan that are to be implemented by that site plan which are appropriate and consistent with applicable law.

- ***NOTE: THE EXACT BUILDING LAYOUT MAY NOT BE DETERMINED UNTIL THE SITE PLAN STAGE.**

7. DGCR 1.15 –

Prepare a master landscaping, vegetation, fencing, and signage plan (“Plan”), with phasing and an implementation strategy for this comprehensive plan area. This master landscape plan should be submitted ~~concurrent with within one (1) year of approval of~~ the first rezoning application ~~for review and approval by the County Archaeologist,~~ and, thereafter, each applicable site plan shall include those elements of the plan that are to be implemented by that site plan ~~which are which are appropriate and consistent with applicable law.~~ The intent is to design a Plan that mitigates adverse effects of development on the Manassas National Battlefield Park, Conway Robinson

State Forest and the surrounding area; integrates new development with the historic landscape; and integrates new development with proposed parks and open spaces and trails; through a set of context sensitive, design guidelines. The intent is to build a strong, practical, and adaptable framework.

- ***NOTE: THE MASTER LANDSCAPE PLAN MAY NOT BE DETERMINED UNTIL THE SITE PLAN STAGE.**

8. DGGI 1.1 –

~~Where feasible and appropriate, Establish Protected Open Space that prioritizes the establishment of a substantial amount of public and private protected open space. Protected Open Space should consist of two types of open space aimed specifically at preserving and restoring natural land forms: Natural Open Space areas within each development in the Study Area, which may include Natural Open Space areas (generally as defined in the Zoning Ordinance) and Restored Open Space. Restored Open Space consist specifically designed to improve the quality of previously disturbed areas that will be restored to native forest wetlands or meadows during or areas disturbed during development for the extension of utilities or road construction, such as through reforestation and stream restoration during development and subsequently protected from further disturbance. Protected Open Space areas should include:~~

1. Environmental Resource areas ~~(as defined in the Comprehensive Plan)~~ which include ~~FEMA floodplain, and FEMA flood Hazard, natural 100-year floodplains as defined by the DCSM- Chesapeake Bay RPAs, wetlands, Resource Protection Areas, Wetlands, areas with~~ 25% or greater slopes, areas with 15% or greater slopes in conjunction with soils with severe limitations, areas, of marine clays, public water supply sources, ~~wetlands~~ and critically erodible shorelines and streambanks.

- ***NOTE: THE CAPITALIZED TERMS INCLUDED IN THIS PROPOSED LANGUAGE SHOULD MATCH THE EXISTING ZONING ORDINANCE AND COMPREHENSIVE PLAN DEFINITIONS, WHICH IS THE PURPOSE OF THE PROPOSED CHANGES INCLUDED ABOVE. THE PROTECTED OPEN SPACE DEFINITION IS MORE THAN THE ZONING ORDINANCE NATURAL OPEN SPACE DEFINITION. IMPACTS TO SOME OF WHAT THE COUNTY LISTED CAN BE MITIGATED WITH DEVELOPMENT STANDARDS.**

9. DGGI 1.2 –

Utilize qualified third-party Virginia Conservation Easement Act conservation easements to permanently protect ~~public and private natural open space areas~~ areas designated during rezoning review as Protected Open Spaces.

- ***NOTE: THIS PROPOSED CHANGE HINGES ON THE FACT THAT THE COMPREHENSIVE PLAN AMENDMENT IS A GUIDELINE AND NOT AN IMPLEMENTATION DOCUMENT. GRANTING OF CONSERVATION EASEMENTS IS BEST DEALT WITH DURING REZONING REVIEW.**

10. DGGI 1.6 –

Buffers along the perimeter of the Study Area should be as shown Figure ~~11~~13, PW Digital Gateway Green Infrastructure Map. Buffers should prioritize preserving and restoring existing forest and native meadows. Partner with the Planning Office and Manassas National Battlefield Park to identify areas where mitigation of viewshed impacts from development prevail over meadow restoration.

- ***NOTE: THE CORRECT FIGURE REFERENCE IS FIGURE 13, NOT FIGURE 11.**

11. DGM 1.2 –

... Buffering along Pageland Lane should be an ~~an minimum-average~~ of 50' but is encouraged to be more when appropriate.

- ***NOTE: THIS PROPOSED CHANGE HINGES ON THE FACT THAT THE COMPREHENSIVE PLAN AMENDMENT IS A GUIDELINE DESIGNED TO ALLOW FOR FLEXIBILITY AND NOT AN IMPLEMENTATION DOCUMENT. THE APPLICANTS REQUEST FLEXIBILITY WITH THIS LANGUAGE AS SOME AREAS MAY BE LESS THAN 50' BUT IN OTHER AREAS IT COULD BE MORE.**

12. DGSU 1.1 –

Data centers are encouraged to utilize a variety of sustainability initiatives such as:

- Reduce the heat island effect by minimizing impervious areas and providing enhanced landscaping.
- Reduce, control, and treat surface runoff through effective storm water practices that treat the quantity and quality of runoff above minimum standards.
- Onsite renewable energy such as solar power.
- Aeration of water retention using solar power.
- Apply best practices for erosion control.
- Provide electric vehicle (“EV”) charging stations in data center employee parking areas to encourage EV use.
- Require the use of LEDs for all interior and exterior lighting.
- Minimize land disturbance.
- Recycle construction material waste.
- Incorporate heat reflective roofing.
- Use sustainable building materials in the construction of data centers.
- Capture and use 100% of reclaimed water for non-potable use.
- Trap and reuse heat sources to the maximum extent possible
- Incorporate other innovative technologies to reduce power consumption.
~~Achieve LEED Core and Shell standards.~~
- Preparation of a winter management plan (e.g., SaMS toolkit) to minimize the use of sodium and chloride, and to address any impacts of their use.

- ***NOTE: LEED STANDARDS ARE ADDRESSED IN DGSU 1.3.**