

Waller Solar

Waller Solar I, LLC



PERMIT BY RULE

Small Renewable Energy Project (Solar)

Permit by Rule

Application Documents

Prepared by Timmons Group

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III. ATTACHMENTS

ATTACHMENT A – Notice of Intent

ATTACHMENT B – Compliance with Local Land Use Ordinances

ATTACHMENT C – Interconnection Studies

- Generation Interconnection Feasibility Study Report for Queue Position AD2-074
- System Impact Study Report for Queue Position AD2-074
- Generation Interconnection Feasibility Study Report for Queue Position AF1-042
- System Impact Study Report for Queue Position AF1-042
- Generation Interconnection Facility Study Report for PJM Generation Interconnection Request Queue Position AD2-074 & AF1-042

ATTACHMENT D – Interconnection Agreement

- Interconnection Service Agreement Among PJM Interconnection, L.L.C. and Waller Solar I, LLC and Virginia Electric and Power Company

- Interconnection Construction Service Agreement among PJM Interconnection L.L.C. and Waller Solar I, LLC and Virginia Electric and Power Company

ATTACHMENT E – Maximum Generation Capacity Certification

ATTACHMENT F – Threatened and Endangered Species

- Virginia Department of Wildlife Resources – Wildlife Environmental Review Map Services
- Virginia Department of Conservation and Recreation
- Survey for *Isotria medeoloides* (Small Whorled Pogonia)

ATTACHMENT G – Coastal Avian Protection Zone Analysis

- Coastal Avian Protection Zone
- Bald Eagle Nest Survey Report

ATTACHMENT H – Cultural Resources: Phase I Assessment and Correspondence

- Virginia Department of Historic Resources letter dated July 22, 2022
- Phase I Cultural Resource Assessment

ATTACHMENT I – Cultural Resources: Phase II Assessment and Correspondence

- Virginia Department of Historic Resources letter dated October 6, 2022
- Phase II Archaeological Evaluation of Site 44LA0184

ATTACHMENT J – Cultural Resources: Impacts Assessment and Correspondence

- Virginia Department of Historic Resources letter dated October 31, 2022
- Impacts Assessment and Avoidance of NRHP-Eligible Resources

ATTACHMENT K – Wetland Delineation

ATTACHMENT L – Mitigation Plan

ATTACHMENT M – Certification of Design

ATTACHMENT N – Operating Plan

ATTACHMENT O – Site Plan, Context Map

ATTACHMENT P – Environmental Permit Certification Form

ATTACHMENT Q – Non-Utility Certification Form

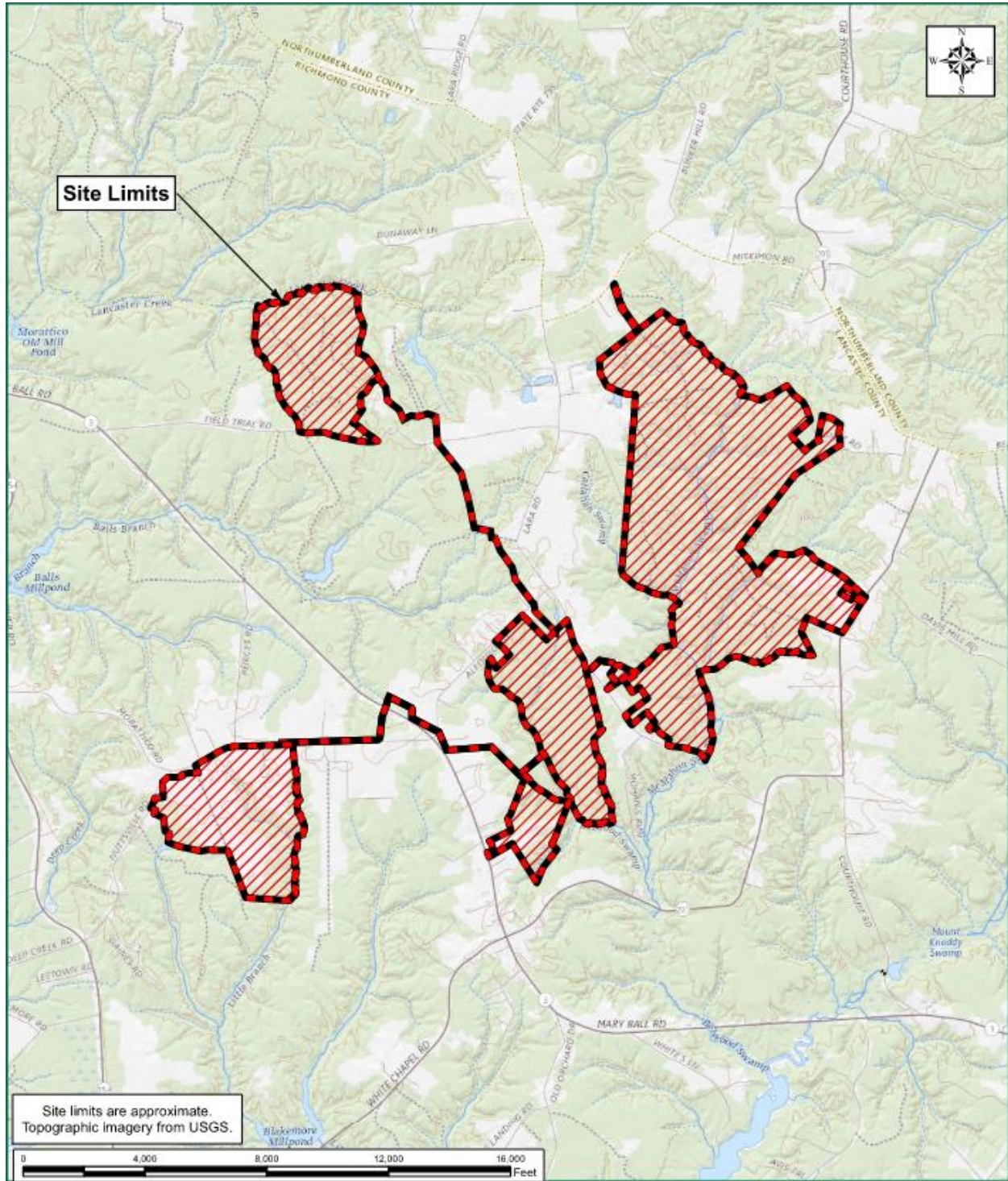
ATTACHMENT R – Public Review

I. INTRODUCTION AND OVERVIEW

Waller Solar I, LLC (the “Applicant”) is proposing to construct Waller Solar (the “Project”), an approximate 131 MWac solar facility to be developed on approximately 2,674 acres located in Lancaster County, Virginia (“Project Area”). The Project is located on privately-owned land in northern Lancaster County, on the east and west sides of State Route 3 between White Chapel Road and the boundary with Richmond County.

The Project includes the utilization of approximately 320,000 photovoltaic bi-facial solar modules to produce electricity, which will ultimately connect to the regional PJM electric grid. The Project will primarily utilize panels affixed to a single-axis tracking system that is able to alter direction for optimal solar exposure; however, the Project may also utilize panels attached to a fixed-tilt racking system.

This application, including this narrative and associated attachments, comprise the Project’s Permit by Rule application materials. This information is being submitted pursuant to 9 VAC 15-60 in order to obtain authorization from the Virginia Department of Environmental Quality (DEQ) for the construction of the proposed Project in accordance with the Small Renewable Energy Projects (Solar) Permit by Rule (Solar PBR) guidance.



U.S. Geological Survey, 2019. 7.5 Minute Series, Lively and Lancaster, Virginia, Topographic Quadrangle Map, 1:16,000 scale.

Figure 1 – Waller Solar Vicinity Map

II. PERMIT BY RULE COMPLIANCE ANALYSIS

A discussion of the fifteen items required for compliance with the Solar PBR regulations are included below. With these items, compliance with the Solar PBR regulations has been achieved by the Applicant.

1. NOTICE OF INTENT

A Notice of Intent was submitted to the Virginia Department of Environmental Quality on June 7, 2021, and was published in the Register of Regulations in Volume 38, Issue 1 on August 30, 2021. A copy of the publication is included in Attachment A.

2. COMPLIANCE WITH LOCAL LAND USE ORDINANCES

A copy of the Local Governing Body Certification Form, signed by the Zoning Administrator of Lancaster County on April 28, 2022, is included in Attachment B. Also included is the Lancaster County Board of Supervisors Final Conditions letter, dated November 30, 2021.

3. INTERCONNECTION STUDIES

Interconnection Studies have been completed by the regional transmission organization and/or regional transmission owner on behalf of the Project. The following studies, which are included in Attachment C, were completed:

- Generation Interconnection Feasibility Study Report for Queue Position AD2-074
- System Impact Study Report for Queue Position AD2-074
- Generation Interconnection Feasibility Study Report for Queue Position AF1-042
- System Impact Study Report for Queue Position AF1-042
- Generation Interconnection Facility Study Report for PJM Generation Interconnection Request Queue Position AD2-074 & AF1-042

4. INTERCONNECTION AGREEMENT

In accordance with 9VAC15-60-30 4, Waller Solar I, LLC has provided the Interconnection Service Agreement (ISA) and Interconnection Construction Service Agreement (ICSA) in Attachment D. The ISA and ICSA are by and among PJM Interconnection, LLC, Waller Solar I, LLC and Virginia Electric and Power Company for PJM Queue Position AD2-074 and AF1-042.

5. MAXIMUM GENERATION CAPACITY CERTIFICATION

The maximum generation capacity of this proposed facility is approximately 131 MWac. A copy of the Maximum Generation Capacity Certification is included in Attachment E.

6. ANALYSIS OF POTENTIAL IMPACT ON AIR QUALITY STANDARDS

An analysis of the potential environmental impacts of the Project shows that operations will not negatively affect the attainment of national ambient air quality standards (NAAQS). The renewable energy produced by the Project would offset the need for other, more conventional energy sources that have adverse impacts on air quality. Potential positive impacts on air quality resulting from operations of the Project, as opposed to other conventional energy sources, are quantified below as emissions avoided:

- 256,650 lbs of sulfur dioxide
- 193,170 tons of carbon dioxide
- 176,290 lbs of nitrogen oxide
- 24,520 lbs of particulate matter 2.5 μm

The above calculations are estimates, based on analysis using the EPA Avoided Emissions and Generation Tool at [AVERT Web Edition | US EPA](#). Mid-Atlantic regional data was utilized for the calculations based on the Project location.

7. ANALYSIS OF POTENTIAL BENEFICIAL/ADVERSE IMPACTS ON NATURAL RESOURCES

As prescribed in 9VAC15-60-40, the Applicant has performed an analysis of the beneficial and adverse impacts of the proposed Project on natural resources. The analysis includes both desktop and field surveys for natural and cultural resources. Materials associated with the Threatened and Endangered Species analyses are enclosed in Attachments F and G.

A. WILDLIFE ANALYSIS

Threatened and Endangered Species

A desktop analysis was conducted to assess potential beneficial and adverse impacts of the proposed Project on relevant wildlife. The Applicant obtained information from the following agencies and their associated databases:

- Virginia Department of Wildlife Resources (VDWR) – Wildlife Environmental Review Map Services (WERMS)
- Virginia Department of Conservation and Recreation (VDCR)

The WERMS map (see Attachment F) provides a review of known wildlife species within the Project Area and two miles of the Project Area. The WERMS map did not identify any state or federally listed species within the Project Area or within two miles of the Project Area. There are non-threatened and non-endangered species within two miles of the Project Area, and these species are identified on the WERMS map.

According to VDCR correspondence dated April 1, 2022 (see Attachment F), the Project will not affect any documented state-listed plants or insects. Natural heritage resources have not been documented within the Project Area or within a 100-foot buffer around the project area.

In September 2021, Rouse Environmental Services conducted a field survey for Small Whorled Pogonia (*Isotria medeoloides*), a rare orchid that has been documented in the neighboring localities of Gloucester County, York County, and James City County. Although areas of potentially suitable habitat were documented, the presence of Small Whorled Pogonia were not identified in the Project Area. A report on the survey can be found in Attachment F.

Expected beneficial and adverse impacts

According to the reviewed resources and field studies, threatened and/or endangered species do not exist within the Project Area. Information provided by VDCR and VDWR indicate the project will not have an adverse impact.

Coastal Avian Protection Zone

The Project Area was compared with the Coastal Avian Protection Zones (CAPZ) data as provided by the Virginia Coastal Zone Management Program, as obtained from VDEQ's Coastal GEMS geospatial data system. An exhibit showing the Project vicinity in relation to the CAPZ areas is included in Attachment G and shows that the Project is located in CAPZ 12 and 13, both of which are associated with breeding bald eagles. Financial mitigation is required for the portion of the project located within Zone 12, which totals 53 acres and will supply approximately 5.41MWac of the Project's total 131MWac. The rest of the Project is located in CAPZ 13. Coordination between VDEQ and VDWR determined that an avian field survey was not required for a solar site in this zone, but the Project chose to perform a bald eagle survey to reduce the risk of any potential adverse impacts on breeding bald eagles.

In April 2022, Copperhead Environmental Consulting conducted an aerial and ground-based bald eagle nest survey for the Project and a surrounding 660-foot buffer. The survey was completed in accordance with the U.S. Fish and Wildlife Service (USFWS) Eagle Conservation Plan Guidance and Eagle Incidental Take and Eagle Nest Take Regulations. The survey did not find any bald eagle or other raptor nests within the Project Area or the 660-foot buffer. A report on the survey can be found in Attachment G.

Expected beneficial and adverse impacts

The Project is within CAPZ Zone 12 and 13. The relevant avian species in both zones are breeding bald eagles. A bald eagle nest survey was conducted for the entire Project area plus an additional 660-foot buffer. Neither bald eagle nests nor other raptor nests were identified with the Project or buffer area, so adverse impacts as a result of the Project are not expected. As a result of the Project's partial location in Zone 12, financial mitigation amounting to \$5,410 is required and is expected to benefit further scientific research on the impacts of projects in CAPZ on avian resources.

B. CULTURAL/HISTORICAL RESOURCE ANALYSIS

The Applicant conducted a Phase I Cultural Resource Survey, dated June 2022, of the archaeological and architectural features of the Project. The Virginia Department of Historic Resources (VDHR) provided comments on the survey on July 22, 2022. Based on the conclusions from the Phase I Survey, the Applicant conducted a Phase II Archaeological Evaluation, dated August 2022, of Site 44LA0814. VDHR provided comments on the Phase II survey on October 6, 2022. The Applicant provided VDHR with additional information in an Impacts Assessment and Avoidance of NRHP-Eligible Resources plan and VDHR concurred in a letter dated October 31, 2022. All cultural resource analysis documentation is included as Attachments H, I, and J.

All research, fieldwork, and recording conducted as part of these investigations conforms to the guidelines specified in the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (Federal Register 48:44716-44742, September 29, 1983), the VDHR's *Guidelines for Conducting Historic Resources Survey in Virginia* (rev. 2017) and VDEQ's *Solar Permit by Rule Guidance* (2012) for complying with the provisions of §10.1-1197.6 B 7 of the Code of Virginia. Both the Phase I and Phase II assessments were conducted through desktop and field review by a professional meeting the qualification standards of the Secretary of the Interior's Standards for Archeology and Historic Preservation (9VAC15-60-120 B 2) in the appropriate discipline. The analysis complies with Section 106 of the National Historic Preservation Act of 1966.

A Phase 1a Cultural Resource Assessment was conducted in February 2020 and May 2021, which guided the archaeological portion of the Phase I Cultural Resource Survey. The Phase I Cultural Resource Survey involved archaeological and architectural investigations of the Project to confirm the presence or absence of cultural resources, evaluate their potential eligibility for listing in the National Register of Historic Places (NRHP), and assess the potential impact of the Project on NRHP-eligible resources. The Phase I Survey identified an archaeological site (VDHR #44LA0814) that is potentially eligible for inclusion in NRHP and required avoidance or further study. The Applicant chose to further study the site through a Phase II Archaeological Evaluation.

Archaeology Survey

Expected beneficial and adverse impacts to archaeology resources

As a result of the archaeological investigation of the Phase I cultural report, two archaeological resources (VDHR ID #s 44LA0184 and 44LA0185) were identified and recommended as potentially eligible for inclusion in the NRHP. To avoid potential adverse impacts, site 44LA0185 will be avoided with a 25-foot buffer. It was recommended that site 44LA0184 either be avoided or studied further if the site cannot be avoided. VDHR concurred with the Phase I survey conclusions in a letter dated July 22, 2022. The Phase I report and related correspondence from VDHR can be found in Attachment H.

The Applicant chose to perform a Phase II archaeological investigation of site 44LA0184, and a result, recommended that only the northern portion of the site be eligible for listing on the NRHP. In a letter dated October 6, 2022, VDHR could not concur with this recommendation without additional evaluation. The Phase II report and related correspondence from VDHR can be found in Attachment I. To avoid potential impacts to resource 44LA0184, the Project will avoid the entirety of the site with a 25' buffer. The Project will therefore not adversely impact any NRHP-eligible archaeological sites. VDHR concurred with these findings in a letter dated October 31, 2022, which can be found in Attachment J.

Architectural Survey

Architectural resources survey for the Waller Solar project resulted in the identification and recordation of 114 historic architectural resources located within the 0.5 mile survey area. Of the surveyed resources, 36 were previously recorded (VDHR ID #s 051-0008, 051-0020, 051-0041, 051-0046, 051-0059, 051-0092, 051-0096, 051-0117, 051-0235, 051-5019, 051-5021/5023, 051-5033, 051-5053/5056, 051-5058/5060, 051-5063/5068, 051-5091, 051-5208, 051-5212/5217, and 051-5219) and during this survey nine of these were found to have been previously demolished. The remaining 78 resources were newly recorded during this Phase I survey (VDHR ID #s 051-5294 through 051-5371). Seven of the surveyed resources appear to reflect unique or significant design or historical associations, and as such, are recommended for listing in the NRHP. None of the resources are located directly within the limits of the Project.

Viewshed analyses were conducted from each of the seven potentially-eligible properties to determine if the Project will result in any change in setting or viewshed that would pose indirect or visual impacts. Some resources have no visibility of the Project area due to distance and existing vegetation. Where the Project area is expected to be visible, the Project site plan has incorporated a variety of measures to reduce visibility including setbacks and a robust landscape plan. With the project setbacks and landscaping, the Project is not anticipated to introduce any substantial change in setting or viewshed to the majority of NRHP-eligible resources, with the exception of one, Epping Forest (VDHR# 051-0008).

This resource, Epping Forest (VDHR# 051-0008) is important as one of the earliest examples of plantation architecture in the region as well as its association to prominent individuals in the history of Lancaster County, including MaryBall Washington, the mother of President George Washington. She was born and raised on the property, and it is located immediately adjacent to the Project area. A robust landscaping screening plan is proposed to reduce visibility of the Project components. It is anticipated that the overall Project will still result in a change in setting and viewshed and will result in a moderate impact to this NRHP-eligible resource.

In a letter dated July 22, 2022, VDHR concurred that the Project poses moderate impacts to VDHR# 051-0008 and minimal impacts to VDHR#s 051-0041, 051-0059, and 051-0096 with the condition that planting plans and renderings showing mature growth in the viewsheds that currently have no buffer are submitted to VDHR for review and comment (see Attachment H).

In an impacts assessment dated September 19, 2022, the Applicant provided VDHR with planting plans and renderings on VDHR#s 051-0008, 051-0041, 051-0059, 051-0096 for review and comment (see Attachment J). The results of the impacts assessment reaffirm that the Project will have a minimal impact on Edgely (VDHR# 051-0041), Lebanon Baptist Church (VDHR# 051-0059), and Lively School (VDHR# 051-0096). To minimize impacts to the Epping Forest (VDHR# 051-0008), the Applicant reengineered the Project to avoid utilization of the field nearest to Epping Forest and has set back all improvements an additional 1,000 feet. The proposed landscaping plan was also revised to shift the supplemental plantings with the array setback. This results in a more effective planting buffer due to the topography of the Project and improvements located farther away from Epping Forest. The revised layout and landscape plan results in a no more than minimal impact to Epping Forest.

Expected beneficial and adverse impacts to architectural resources

As a result of the impacts assessment and avoidance plan prepared on September 19, 2022, the Project will have no more than a minimal impact on any NRHP-eligible architectural resources. VDHR concurred with these findings in a letter dated October 31, 2022, as noted in the table below. The impacts assessment and avoidance plan, along with the related correspondence from VDHR, can be found in Attachment J.

Table 1: NRHP-eligible architectural resources with VDHR recommendations of project impacts

VDHR ID #	Resource Name/Address	NRHP Eligibility	Project Impacts
051-0008	Epping Forest, 677 Moratico Road	Eligible	Minimal
051-0041	Edgely, 9279 Courthouse Road	Eligible	Minimal
051-0059	Lebanon Baptist Church, 20 Alfonso Road	Potentially Eligible	Minimal
051-0096	Lively School, Mary Ball Road	Potentially Eligible	Minimal

C. ADDITIONAL NATURAL RESOURCE ANALYSIS

Natural Heritage Resources

The project will not affect any documented state-listed plants or insects.

In addition, VDCR recommends the development of an invasive species management plan, and the planting of native, perennial vegetation in the buffer areas of the planned facility.

Expected beneficial and adverse impacts

Where practicable, the Applicant will consider revegetating the Project Area with a seed mix that includes Virginia-native species, some of which are also pollinator-friendly species.

Wetland Delineation

A wetland delineation was conducted in the Project area between February and December 2020. The delineation was completed based upon the methodology outlined in the 1987 U.S. Army

Corps of Engineers (USACE) *Wetland Delineation Manual*; the Regional Supplement to the USACE Wetland Delineation Manual: *Atlantic and Gulf Coastal Plain Region (Version 2.0)* and subsequently issued USACE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features.

Using these methodologies, approximately 74,373 linear feet of streams, 251.45 acres of palustrine forested wetland (PFO), 1.84 acres of palustrine scrub-shrub wetland (PSS), 6.38 acres of palustrine emergent wetland (PEM), and 0.08 acres of palustrine open water (POW) were delineated within the Project Area. Most of the delineated wetlands are associated with streams.

The USACE confirmed the wetland delineation findings in a Preliminary Jurisdictional Determination (PJD) issuance dated May 21, 2021. The wetland delineation information and PJD are enclosed in Attachment K.

Expected beneficial and adverse impacts

If stream crossings are necessary, they will be permitted and culverted to maintain flow. A 100' buffer area will be maintained around all delineated streams and wetlands that require a resource protection area (RPA) per the Chesapeake Bay Preservation Act. Therefore, no beneficial or adverse impacts to streams or wetlands are anticipated.

8. MITIGATION PLAN

In accordance with 9VAC15-60-60, a mitigation plan detailing reasonable actions to be by the Project to avoid, minimize, or otherwise mitigate impacts to wildlife or historic resources is included in Attachment L.

9. CERTIFICATION OF DESIGN INCORPORATING MITIGATION PLAN

According to 9VAC15-60-80, the design and installation of Small Solar Energy Projects shall incorporate any requirements of a mitigation plan, if that mitigation plan is required according to 9VAC15-60-50, which this Project requires. The certification of design form is attached as Attachment M.

10. OPERATION PLAN INCORPORATING MITIGATION PLAN

The operating plan is included as Attachment N in accordance with 9VAC15-80.

11. SITE PLAN & CONTEXT MAP

A site plan and context map have been provided in accordance with 9VAC15-60-70 in **Figures 2 and 3** below and are also included as Attachment O in greater detail.

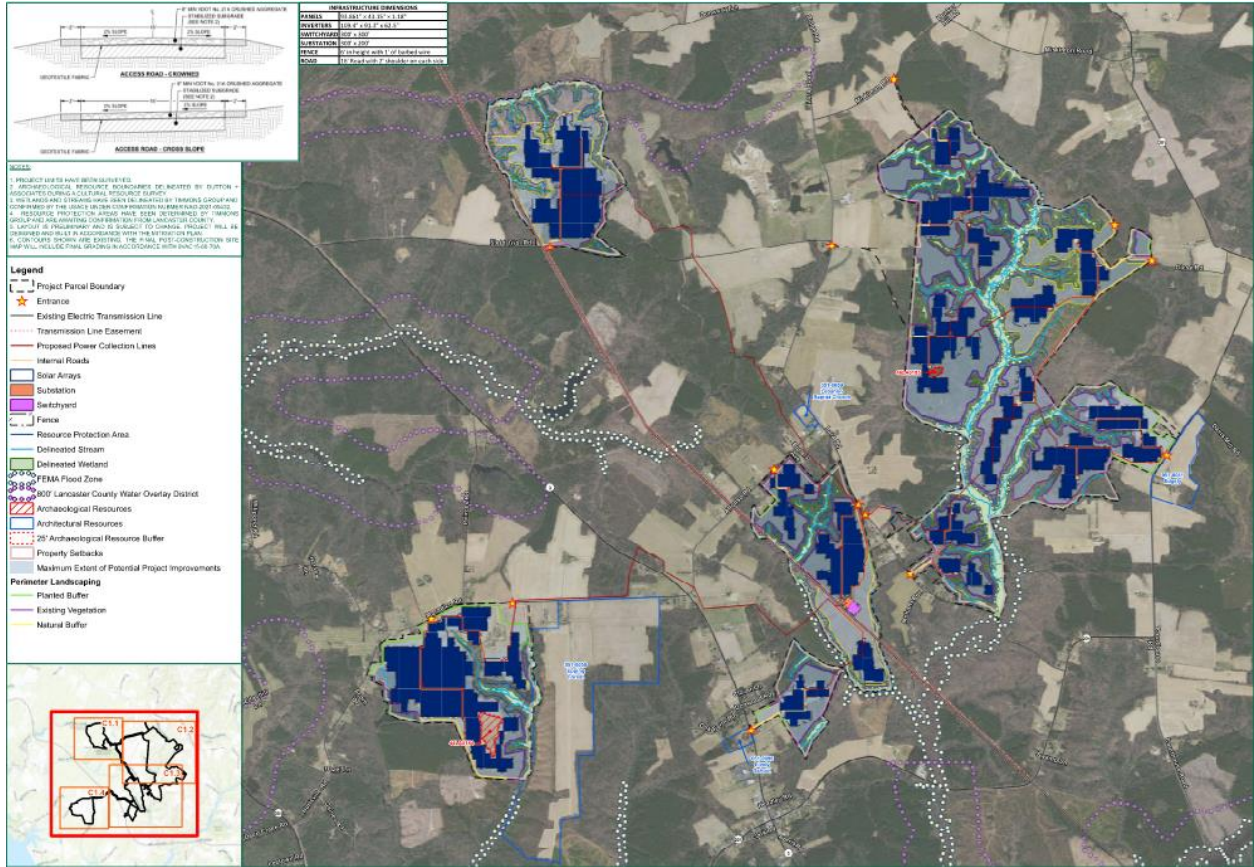


Figure 2 – Site Plan

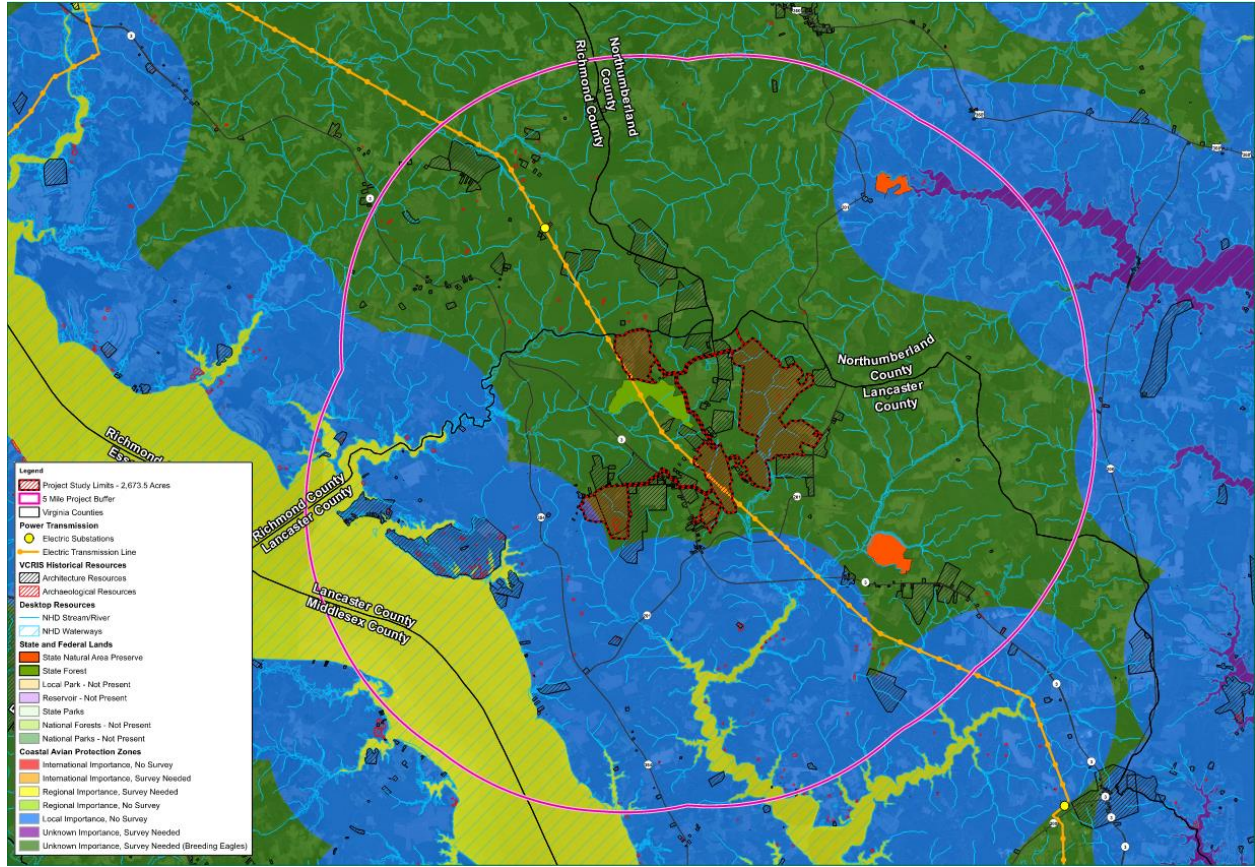


Figure 3 – Context Map

12. CERTIFICATION OF APPLICATION FOR ENVIRONMENTAL PERMITS

As certified in the Environmental Permit Certification Form (Attachment P), the applicant has identified and will obtain all necessary environmental permits. Waller Solar I, LLC will obtain a Virginia Stormwater Management Program – General Permit upon completing final engineering and site design.

13. NON-UTILITY CERTIFICATION

As certified and signed by Sean Fairfield in the Non-Utility Certification Form (Attachment Q), the Applicant is not a utility regulated pursuant to title 56 of the Code of Virginia.

14. PUBLIC REVIEW

In accordance with § 10.1-1197.6 B 13 and 14 of the Code of Virginia, a 30-day public review and comment period will be held between November 25, 2022 and December 25, 2022. The public comment period and public meeting will be advertised in the Rappahannock Record for two consecutive weeks on November 10, 2022 and November 17, 2022. Materials are available for viewing during that time at Lancaster County Administration Building located at 8311 Mary Ball Road, Lancaster, VA 22503. Pursuant to 9VAC15-60-90, a public meeting will be held on December 14, 2022 from 5 pm to 7pm at the Upper Lancaster Volunteer Fire House located at 5170 Mary Ball Road, Lancaster, VA 22503.

Materials in support of the public comment period, including a public participation summary, are included in Attachment O.

15. PERMIT FEE

In accordance with 9VAC15-60-110, a payment of \$14,000 will be provided with the final application as stipulated by the PBR.