Agenda
Board of Supervisors
Isle of Wight County
May 20, 2021

1. Call to Order (5:00 P.M.)
2. Approval of Agenda
3. Closed Meeting
4. Reconvene Open Meeting at 6:00 P.M.
5. Invocation - Chairman Richard L. Grice
6. Citizens' Comments
7. Consent Agenda
    A. Budget Amendment - Batiste Court Road Improvements

       Resolution to Amend the Budget and Appropriate Funds for the Batiste Court Road Improvements
    B. Budget Amendment - Children's Services Act

       Resolution to Amend the Budget and Appropriate Funding for the Children's Services Act Supplemental Allocation ($184,465)
    C. Budget Amendment - Drug Court Grant

       Resolution to Amend the Budget and Appropriate Drug Court Grant Funds ($585,500)
    D. Budget Amendment - Hardy Elementary School

       Resolution to Amend the Budget and Appropriate Funding for Hardy Elementary School Architectural Design Fees ($1,400,000)
    E. Budget Amendment - Windsor Town Center Roof Project

Resolution to Amend the Budget and Appropriate Funding from the Fund Balance for the Windsor Town Center Roof Project ($358,663)

F. Circuit Court Records Preservation Program Grant

Resolution to Budget and Appropriate Grant Funds from the Virginia Circuit Court Records Preservation Program ($9,247)

G. Court Appointed Special Advocates

Request for Funding from the Voices for Kids Court Appointed Special Advocates ($10,000)

H. Insurance Proceeds

Resolution to Accept and Appropriate Insurance Proceeds from VaCorp Risk Management for Repairs ($22,494)

I. Minutes

. February 4, 2021 Work Session Minutes
. March 4, 2021 Work Session Minutes
. March 18, 2021 Regular Meeting Minutes

8. Regional and Inter-Governmental Reports

A. Regional Reports

9. Appointments

A. Appointments List

10. Special Presentations / Appearances

A. VDOT Presentation

VDOT Presentation - Tommy Catlett

B. COVID-19 Vaccine Update

Staff Update on COVID-19 Vaccine Rollout in Western Tidewater

C. Emergency Medical Services Week

Resolution to Designate May 16-23, 2021 as Emergency Medical Services Week

11. County Attorney's Report
12. Public Hearings
    A. Request for Real Estate and Personal Property Tax Exemption

       Ordinance for Real Estate and Personal Property Tax Exemption from Smithfield Recreation Association

    B. VDOT FY 2022 Secondary Six Year Improvement Plan

       Resolution to Approve the VDOT FY2022-2027 Secondary Six Year Improvement Plan

13. County Administrator's Report
    A. Caught You Caring Awards

       List of Recipients of Caught You Caring Awards for the Third Quarter of FY2020-21

    B. Matters for the Board's Information

14. Unfinished / Old Business
    A. Cavalier Solar Conditional Use Permit Application

       Application from Cavalier Solar A, LLC, for a Conditional Use Permit, CUP-3-19, to Construct and Operate a Major Utility Service Use Consisting of a Utility-Scale Solar Energy Generation Facility, Including Related Equipment, 34.5 kV Electrical Feeder Lines, Project Substation, and 500 kV Gen-Tie (Overhead) Transmission Line on Properties Zoned Rural Agricultural Conservation (RAC) on Burwells Bay Road, Jones Drive, Mill Swamp Road, and Pons Road and a Request from the Owners of Six Affected Parcels to Withdraw Their Properties from the Moonlight Agricultural/Forestal District

15. New Business

    A. Ambulance Request

       Resolution to Amend the FY21 Budget and Appropriate Funding for a Medic Unit ($222,595)

    B. Longevity Pay

       Resolution to Adopt Chapter 1: Personnel, Article III, Section 3.12 of the County Policy Manual

    C. Mid-Year Salary Adjustment

       Resolution to Authorize a Mid-Year Salary Adjustment

    D. Smart Scale Project - Bartlett Intersection

       Resolution to Appropriate Funding for the Route 17 Bartlett Intersection Smart Scale Project ($53,000)

    E. Franklin Redevelopment and Housing Authority Request

       Cooperation Agreement with the Franklin Redevelopment and Housing Authority to Allow Payment in Lieu of Taxes

    F. RV Use on Private Property

       Discussion of RV Use on Private Property

    G. Ancillary Buildings

       Discussion of Ancillary Buildings on Residential Property

    H. Short-Term Rentals

       Discussion of Regulation of Short-Term Rentals

16. Adjournment

ISSUE:

Resolution to Amend the Budget and Appropriate Funds for the Batiste Court Road Improvements

BACKGROUND:

The developer for Batiste Estates subdivision has failed to make sufficient road improvements resulting in the need for the County to make a claim against the developer's performance bond.

The Board of Supervisors may wish to approve improvements to Batiste Court to satisfy Virginia Department of Transportation specifications for road acceptance.

BUDGETARY IMPACT:

Approval of this project will necessitate a transfer of $5,674 from budgeted Contingency for the General Fund transfer to the Capital Project Fund and $49,300 from budgeted Local Match Reserve to the Batiste Court project.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate funds for the Batiste Court road improvements.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/20/2021
Project Scope and Fee Package	Backup Material	5/20/2021

RESOLUTION TO AMEND THE FY 2020-2021 BUDGET AND APPROPRIATE FUNDING FOR BATISTE COURT ROAD IMPROVEMENT

WHEREAS, the developer for Batiste Estates subdivision failed to make sufficient road improvements resulting in the need for Isle of Wight County to make a claim against the developer's performance bond; and,

WHEREAS, the Board of Supervisors has approved improvements to Batiste Court to satisfy Virginia Department of Transportation specifications for road acceptance; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 Budget in the amount of $28,738 from performance bond proceeds; and,

WHEREAS, the Board of Supervisors needs to approve a transfer of $5,674 from budgeted Contingency for the General Fund transfer to the Capital Project Fund and $49,300 from budgeted Local Match Reserve to the Batiste Court project; and,

WHEREAS, the Board of Supervisors needs to appropriate $83,712 for the Batiste Court project to fund the road improvements.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that the FY 2020-2021 Budget is hereby amended and funds appropriated for the Batiste Court road improvements.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments, execute necessary procurement and contracting documents, and to do all things necessary to give this resolution effect.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to form:

_____

Robert W. Jones, Jr., County Attorney

From:	Thomas Druhot
To:	Jamie Oliver
Cc:	Donald Lockard
Subject:	FW: Batiste Court Re-bid Recommendation for award
Date:	Wednesday, May 19, 2021 2:46:22 PM
Attachments:	Batiste Court Improvements_The Blair Bros., Inc._5-14-21.pdf

Thomas A. Druhot, PE, CCM, DBIA
Senior Program Manager
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From: Thomas Druhot
Sent: Tuesday, May 18, 2021 3:56 PM
To: Jamie Oliver <joliver@isleofwightus.net>
Cc: Donald Lockard (Donald.Lockard@alphacorporation.com) <Donald.Lockard@alphacorporation.com>
Subject: Batiste Court Re-bid

Jaime,

When the original bids exceeded the County's budget, you asked Alpha to review the quantities and field conditions with the objective of reducing the cost of a rebid. I and Alpha Senior Inspector, Larry Jesse, met with VDOT at the project site and discussed VDOT's letter requirements for VDOT to incorporate the Batiste ourt road into the VDOT maintained network. Based on that field discussion, Alpha re-calculated quantities, made changes to bid items, added missing items and prepared a package for readvertisement. During the course of redvertising to seven contractors, an addendum was added at the request of one of the contractors. Addendum 1 permitted the full milling of the existing IM-19.0, compacting the aggregate base, placing 2" new IM 19.0, and 1.5" new SM-9.5A. This would remove the required asphalt crack repair and the Emul. Asph. Application (which was very expensive for the proposed project.)

Two bidders responded (the same two as initially). Each bidder had some exclusions and caveats in

their quotes. The results of the bids are as follows:

Bidder	Amount	Exclusions
Blair Brothers	$71,712.00	…[Quote] specifically exclude any permits, tests, inspections, bonds., etc.; herbicide; undercut or fill; unstable sub-grade, underground utilities; topsoil, seeding or landscaping; prime, prime & cover; environmental structures; damage to existing trees or plants; traffic control or asphalt markings. All work shall be weather permitting. Hand work asphalt may not be as smooth as machine laid asphalt. One mobilization is included. LIQUID ASPHALT CLAUSE: This quote/clause must become part of any contract drawn up from its content. Liquid asphalt (AC) at the time of this quote is $469.50 per ton; this is based off of the VDOT liquid asphalt index. At the time of installation, the liquid asphalt will be adjusted per ton to reflect the current VDOT liquid asphalt index.
Excel Paving	$140,533.00	… quote does not include any engineering , performance and payment bonds (add 1 %), permits, fees, Davis Bacon Wage Rates, signal loops, signage, utility adjustments, prime coat, night work, weekend work, light towers, dewatering, well point systems, landscaping, temporary/ permanent seeding, uti lities work, testing, geotextile fabrics, temporary facilities, sub surface obstructions, surveying, retainage, temporary pavement, liquidated damages, E & S Controls, SWPPP and RLD, Stamped As-Built Drawings, mulching, topsoil, select fill, trench backfil l, and anything else not mentioned.

I would recommend that the County make award to Blair Brothers. I have reviewed their exclusions and add the following for your benefit. Blair Brothers exclusions for testing is something that needs to be included in the CEI cost that was originally intended to be performed by the contractor. There are no known utilities involved. The only denuding of vegetation should be the ditches which will not need E&S measures. Traffic control is limited to temporary closure of the court. No pavement markings are to be installed.

I have previously copied you on bidding documents from both contractors and copied you on my request for bid clarifications for both. Attached is the bid sheet from Blair Brothers.

If I can be of further assistance, please call or email.

Thank you,

Tom

Thomas A. Druhot, PE, CCM, DBIA
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Alpha Corporation's mission is to provide innovative and sustainable solutions for the lifecycle of building and infrastructure projects through the integration of best practice engineering, management, project controls, and technology.

Per Title VI of the Civil Rights Act of 1964, Alpha Corporation will not discriminate on the grounds of race, color, or national origin. In addition to Title VI, Alpha Corporation will not discriminate under other statutes that afford legal protection on the basis of sex, age, disability or low income in the selection and retention of subconsultants, including procurement of materials and leases of equipment. Alpha Corporation will ensure that minorities will be afforded full opportunity to submit proposals and will not be discriminated against in consideration for an award.
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SCHEDULE OF UNIT PRICES:

PROJECT: BATISTE COURT IMPROVEMENTS

IFB # XX-XXXX-XX

BID SUBMITTED BY: THE BLAIR BROS., INC.

VDOT Item #	Pay Item	Quantity	Unit	Unit Price	Total
00100	MOBILIZATION	1	LS	$2000.00	$2000.00
	CLEAN EXISTING CURB INLET	2	EA	$1500.00	$3000.00
	CLEAN EXISTING SWALES	115	LF	$15.00	$1725.00
	CLEAN EXIST. CURB AND GUTTER	1150	LF	$3.95	$4542.50
11150	GRAVITY FILL POLYMER CRACK SEALING	1	LS	$3742.00	$3742.00
68172	CRACK REPAIR TYPE B (CEMENT CONCRETE)	1	LS	$2,000.00	$2,000.00
16120	EMUL. ASPH. SLURRY SEAL TYPE B	500	SY	$46.00	$23000.00
10635	ASPHALT CONCRETE TY. SM - 9.5A	238	TON	$90.40	$21515.20
10611	ASPHALT CONCRETE TY. IM-19.0D	9	TON	$180.00	$1620.00
10121	AGGR. BASE MATL. TY. I NO. 21A OR 21B	14	TON	$107.50	$1505.00
12600	STD. COMB. CURB & GUTTER CG-6	75	LF	$130.00	$9750.00
12610	RADIAL COMB. CURB & GUTTER CG-6 LF	5	LF	$130.00	$650.00
13244	NS SAW CUT H.C.C. ITEMS	1	LS	$600.00	$600.00
11070	NS SAW-CUT ASPH CONC LF	1	LS	$600.00	$600.00
24420	DEMO. OF PAVEMENT (FLEXIBLE)	75	SY	$29.20	$2190.00
	TOTAL COST				$78,439.20

LIQUID ASPHALT CLAUSE: This quote/clause must become part of any contract drawn up from its content. Liquid asphalt (AC) at the time of this quote is $469.50 per ton; this is based off of the VDOT liquid asphalt index. At the time of installation, the liquid asphalt will be adjusted per ton to reflect the current VDOT liquid asphalt index.

ALPHA CORPORATION

295 Bendix Road, Suite 340
Virginia Beach, VA 23452
Phone: 757.533.9368
Fax: 757.533.9432

May 19, 2021

Jamie Oliver, Transportation Manager
Isle of Wight Count
Department of Public Works; Transportation Division
PO Box 80
Isle of Wight, Va. 23397

Reference: CEI Services – Batiste Estates

Jamie:

In response to your request of October 1, 2020; Alpha Corporation ("Alpha") is pleased to submit these fees for CEI services for the construction activities as defined in the attached documents

- QC testing of asphalt, QA testing, and IA testing to meet VDOT requirements will be performed by Alpha/ETS.
- The construction activities should take no more than 2 weeks (80 hours) of actual onsite work. If the contractor completes the work in less than 2 weeks; then only those hours worked will be billed. If the contractor takes longer than 2 weeks, we will discuss additional fees if applicable.
    - Sr. Inspector – 8 hours/Day RT (to include QC testing)
    - Sr. Inspector – 2 hours/Day OT (These hours may not be needed based on Contractor work hours and work performed.)
    - QA/IA LS as shown in the fee proposal.

CEI Costs: Not to Exceed $11,499.19 (See included fee schedule)

If you have any questions or wish to discuss this report; do not hesitate to contact me at 804.854.9574 or email me at don.lockard@alphacorporation.com

Sincerely,

Donald J. Lockard, PMP, CCM
Transportation Manager
Alpha Corporation

cc: w/ attachments
Cassi Fertig

Alpha Corporation Task Proposal
Isle of Wight
Contract #TBD

Fee Proposal Worksheet

County of Isle of Wight
Isle of Wight, Virginia
Contract#TBD
Construction Administration and Inspection Services

County Work Order No: TBD
Alpha Task Order Number: TBD
Project No.: TBD
Project Manager: Jamie Oliver
Task Order Description: Batiste Estates Construction
Year: 2021
Start Date: TBD
End Date: TBD

Labor

Labor Classification	Employee Name (If availble)	Company	S/T Hours	Billable Rate	O/T Hours	Billable Rate	Basic Services	Additional Services	Optional Services	Total Labor Cost
Project Management										
Project Manager	Don Lockard	Alpha	2.0	$ 205.00		$ -	$ 410.00	$ -	$ -	$ 410.00
Senior Inspector RT	TBD	Alpha	80.0	$ 92.61		$ 109.68	$ 7,408.80	$ -	$ -	$ 7,408.80
Senior Inspector OT	TBD	Alpha	0.0	$ 92.61	20.0	$ 109.68	$ 2,193.60	$ -	$ -	$ 2,193.60
									Subtotal Labor Expenses	$ 10,012.40

Direct Expenses

Description	Company	Quantity	Rate or Rate/Mo.	Months	Miles	Mileage Rate ($/Mile)	Basic Services	Additional Services	Optional Services	Total ODC
Inspection Vehicle - 3 Yr Lease	Alpha	1.00	$ 740.00	0.500			$ 370.00	$ -	$ -	$ 370.00
Cell Phone	Alpha	1.00	$ 45.00	0.500			$ 22.50	$ -	$ -	$ 22.50
QA/IA Testing	ETS	1.00	$ 934.29				$ 934.29			$ 934.29
Job Mileage - Senior Inspector	Alpha	1.00			500.00	$ 0.320	$ 160.00	$ -	$ -	$ 160.00
									Subtotal Direct Expenses	$ 1,486.79

05/19/2021

Consultant Manager Approval — Date

Subtotal Labor	$ 10,012.40
Subtotal Direct	$ 1,486.79
Job Total	**$ 11,499.19**

Fee includes the QC testing of asphalt per the scope document

ISSUE:

Resolution to Amend the Budget and Appropriate Funding for the Children's Services Act Supplemental Allocation ($184,465)

BACKGROUND:

The Children's Services Act Fund is requesting a Supplemental State Allocation due to a deficit created by the specialization and intensity of services required to support the strengths and needs of troubled and at-risk youth and their families in Isle of Wight County, Virginia.

Occasionally, a locality's initial allocation from the state pool is inadequate to cover required services. The Community Policy Management Team must then request a supplemental allocation from the Office of Children's Services for the state share of costs that exceed the current allocation. A supplemental request has been made for the additional cost of services. The increase to the current year budget is expected to be $184,465 more than the initial budget of $370,821. The attached resolution amends the budget for the expected increase that will be funded by a State and County contribution.

BUDGETARY IMPACT:

Increase the FY2020-2021 Children's Services Act Fund budget by $184,465 with state funding of $159,401 and a local match of $25,064. The FY2020-2021 General Fund budget will increase $25,064 for the transfer from unassigned fund balance to the Children's Services Act Fund.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate funding for the Children's Services Act Supplemental Allocation ($184,465).

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/10/2021

RESOLUTION TO AMEND THE FY 2020-2021 BUDGET AND APPROPRIATE FUNDING FOR CHILDREN'S SERVICES ACT SUPPLEMENTAL ALLOCATION

WHEREAS, the current budget for the Children's Services Act services is insufficient to cover the need for services through the current fiscal year; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 Children's Services Act Budget by $184,465 to include State funding of $159,401 and a local match of $25,064; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 General Fund Budget for the transfer of unassigned fund balance of $25,604, to meet the needs of troubled and at-risk youth and their families in Isle of Wight County; and,

WHEREAS, the Board of Supervisors needs to appropriate $184,465 to the Children's Services Act Fund, and appropriate General Fund unassigned fund balance of $25,604, for the needs of troubled and at-risk youth and their families.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY 2020-2021 budget is hereby amended as identified above and funds appropriated in the amounts of one hundred eighty four thousand four hundred sixty five dollars ($184,465) and twenty five thousand six hundred four dollars ($25,604).

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Amend the Budget and Appropriate Drug Court Grant Funds ($585,500)

BACKGROUND:

The 5th Judicial District proposed implementing a Drug Court Program. Both Isle of Wight County and the City of Suffolk have agreed to provide financial support for this program. A federal grant was submitted and awarded to support this program and will require a budget amendment.

The Office of Justice Programs, U. S. Department of Justice (DOJ) has approved an application submitted on behalf of the 5th Judicial District for an award under the OPJ funding opportunity entitled *"Adult Drug Court and Veterans Treatment Courts: Adult Drug Courts."* The DOJ seeks to implement and enhance drug court services, including service coordination, management of drug court participants, and recovery support services. This program provides resources to state, local, and federally recognized tribal governments to enhance drug court programs and systems for nonviolent offenders and veterans with addictions, including stimulant and opioid abuse and overdose.

A grant request was submitted to support the 5th Judicial District Drug Court Implementation. This solicitation requires a twenty-five percent local match. The project total is $440,667 with an approved grant award amount of $330,500 and a required match amount of $110,166.67 to be shared by the City of Suffolk.

Federal Grant requests require a fiscal agent. Isle of Wight County agreed to be the fiscal agent which will require the grant to be managed by the County. A budget amendment is being requested to appropriate funding for this purpose.

BUDGETARY IMPACT:

Increase the FY2020-2021 Grant Fund Budget by $585,500 which includes the grant of $330,5000 covering a three-year period. The remaining budget will be covered by an annual commitment of $50,000 from Suffolk and $35,000 from the County for a total of $255,000.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate Drug Court Grant funds.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/10/2021

RESOLUTION TO AMEND THE FY 2020-2021 GRANT FUND BUDGET AND APPROPRIATE FUNDING FROM U.S. DEPARTMENT OF JUSTICE FOR ADULT DRUG COURTS GRANT

WHEREAS, the Board of Supervisors desires to partner with the localities of the 5th Judicial District to implement a Drug Court and accept the role of fiscal agent for the funding from the Office of Justice Programs, U. S. Department of Justice for the Adult Drug Court and Veterans Treatment Courts: *Adult Drug Courts Grant*; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 Grant Fund Budget in the amount of $585,500 to enhance drug court programs and systems for nonviolent offenders and veterans with addictions, including stimulant and opioid abuse and overdose; and,

WHEREAS, the Board of Supervisors needs to appropriate funds in the amount of $585,500, to be provided by $330,500 in federal funding and a local match funding commitment of $105,000 to be provided by Isle of Wight County and $150,000 from the City of Suffolk, to the FY 2020-2021 Grant Fund Budget for the Adult Drug Courts Program.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY 2020-2021 Grant Fund budget, and future year budgets as needed to provide for the full grant appropriation over the grant period of three years, is hereby amended and funds appropriated in the amount of five hundred eighty-five thousand five hundred dollars ($585,500) for the Adult Drug Courts program.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to form:

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Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Amend the Budget and Appropriate Funding for Hardy Elementary School Architectural Design Fees ($1,400,000)

BACKGROUND:

The Isle of Wight County Schools reverted $1,400,000 to Isle of Wight County from the FY2019-2020 School Operating Budget appropriation. The School System has requested these funds be set aside to pay for the replacement Hardy School architectural design fees.

BUDGETARY IMPACT:

The budget for the general fund will increase by $1,400,000 to be transferred to the Capital Improvement Fund to assign funds to this purpose.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate funding for Hardy Elementary School architectural design fees.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/10/2021

RESOLUTION TO AMEND THE FY2020-2021 BUDGET AND APPROPRIATE FUND BALANCE FOR HARDY ELEMENTARY SCHOOL ARCHITECTURAL DESIGN FEES

WHEREAS, the Board of Supervisors desires to assign funding for the architectural design fees of the Hardy Elementary School replacement; and,

WHEREAS, the Isle of Wight County Schools reverted $1,400,000 to Isle of Wight County from the FY2019-2020 Public Schools Operating Budget appropriation; and,

WHEREAS, the Board of Supervisors needs to budget and appropriate $1,400,000 from the Unassigned Fund Balance of the General Fund to the Capital Projects Fund for Hardy Elementary School architectural design fees.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY 2020-2021 Budget is hereby amended, and funds appropriated in the amount of one million four hundred thousand dollars ($1,400,000) for Hardy Elementary School architectural design fees.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

ISSUE:

Resolution to Amend the Budget and Appropriate Funding from the Fund Balance for the Windsor Town Center Roof Project ($358,663)

BACKGROUND:

Isle of Wight County and the Town of Windsor have recently negotiated a Memorandum of Understanding ("MOU") governing the operation and maintenance of the Windsor Town Center. The MOU provides that the Parties agree that all capital repairs, replacements and all future capital improvements, which shall not include ordinary maintenance and repairs to the facility, which costs exceed $25,000, shall be shared by both Parties equally, providing that a separate agreement and negotiation for such items are done in advance.

The Town identified a need to repair/replace the Windsor Town Center roof and has secured a bid totaling $358,663. The County agreed to share the Cost equally with the Town. The County also agreed that it will provide up front funding for the Cost without interest to the Town to facilitate payment of the repair/replacement. The Town agrees to reimburse the County its share of the Cost, specifically $179,331, with such share to be paid in 5 equal annual payments of $35,866, beginning June 2021.

BUDGETARY IMPACT:

The FY 2021 budget will increase by $358,663.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate funding from the fund balance for the Windsor Town Center roof replacement project.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/11/2021

RESOLUTION TO AMEND THE FY2020-2021 BUDGET AND APPROPRIATE FUND BALANCE FOR WINDSOR TOWN CENTER ROOF PROJECT

WHEREAS, the Board of Supervisors has negotiated a Memorandum of Understanding with the Town of Windsor governing the operation and maintenance of the Windsor Town Center; and,

WHEREAS, the Parties previously negotiated and agreed as to the terms of a capital repair/replacement of the roof of the Windsor Town Center; and,

WHEREAS, the Town of Windsor has secured a bid for such repairs totaling $358,663 that is to be equally shared by both parties; and,

WHEREAS, the County has agreed to make payment for such repairs to the Town of Windsor totaling $358,663 with the provision that $179,331 is to be reimbursed to the County by the Town of Windsor in five annual installments in the amount of $35,863; and,

WHEREAS, the Board of Supervisors needs to amend the FY 2020-2021 budget using unassigned fund balance and appropriate funds in the amount of $358,663, for the Windsor Town Center roof project.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY 2020-2021 Budget is hereby amended and funds in the amount of three hundred fifty eight thousand six hundred sixty three dollars ($358,663) are appropriated for the repair/replacement of the roof of the Windsor Town Center.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____

Robert W. Jones Jr., County Attorney

ISSUE:

Resolution to Budget and Appropriate Grant Funds from the Virginia Circuit Court Records Preservation Program ($9,247)

BACKGROUND:

The Circuit Court Records Preservation Program (CCRP) is a part of the Library of Virginia's Local Records Services Branch. Funded through a $1.50 of the clerk's recordation fee, the CCRP provides resources to help preserve and make accessible permanent circuit court records. The program awards grants to the commonwealth's circuit court clerks to help them address the needs of the records housed in their localities.

The CCRP also provides resources needed to process and house the circuit court records that are transferred to the State Archives for safekeeping and increased access; as well as track, duplicate and maintain circuit court microfilm stored in the Library's media vault.

BUDGETARY IMPACT:

Approval will increase the FY 2020-21 Grant Fund Budget by $9,247.

RECOMMENDATION:

Adopt a resolution to budget and appropriate grant funds from the Virginia Circuit Court Records Preservation Program.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/11/2021

RESOLUTION TO AMEND THE FY 2020-2021 GRANT FUND BUDGET AND APPROPRIATE FUNDING FROM THE LIBRARY OF VIRGINIA CIRCUIT COURT RECORDS PRESEVATION PROGRAM

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 Grant Budget of $9,247 to preserve and make accessible permanent circuit court records in Isle of Wight County, Virginia; and,

WHEREAS, the Board of Supervisors desires to appropriate funding from the Library of Virginia Circuit Court Records Preservation Program to provide resources to help preserve and make accessible permanent circuit court records in Isle of Wight County, Virginia.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2020-2021 Grant Fund budget is hereby amended and funding in the amount of nine thousand two hundred forty seven dollars ($9,247) is appropriated for the preservation and accessibility of permanent circuit court records in Isle of Wight County, Virginia.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

ISSUE:

Request for Funding from the Voices for Kids Court Appointed Special Advocates ($10,000)

BACKGROUND:

Voices for Kids Court Appointed Special Advocates (CASA) is requesting the Board's consideration of a one-time appropriation of $10,000 to assist CASA due to a rising case load and the significant impact COVID-19 has had on its funding.

The County provides funding to CASA annually and the one-time allocation would not impact the base funding provided as part of the budget process.

BUDGETARY IMPACT:

Funding is available in the FY2020-21 budget.

RECOMMENDATION:

Authorize a one-time contribution to the Voices for Kids Court Appointed Special Advocates.

ATTACHMENTS:

Description	Type	Upload Date
Correspondence from CASA	Backup Material	5/12/2021

CASA
Court Appointed Special Advocates
FOR CHILDREN
VOICES FOR KIDS CASA PROGRAM
OF SOUTHEAST VIRGINIA

Voices for Kids CASA Program of Southeast Virginia
P.O. Box 949
409 Main Street
Smithfield, VA 23431
Office: 757-357-2170
Fax: 757-357-5709
mjones@vfkcasa.org
www.vfkcasa.org

Mr. Randy Keaton,

Voices for Kids CASA that serves the IOW JDR courts, would like to request the county to possibly consider increasing our funding by $10,000.00. Our program has seen a 33 % increase of children that we are being assigned to serve. CASA is struggling financially due to the Covid impact on our funding. The program is receiving much less than we have normally relied on in past years. Unfortunately, the programs revenue for IOW has seen a decline of around $28,000.00 which includes but is not limited to the funds we normally bring in from our annual Voices for Kids CASA Gala that was canceled due to the Covid pandemic. This event alone brings in around $18,000.00 and the funding that is raised that night is strictly used for IOW. The extra funding request would truly help us supplement our loss in revenue for this upcoming year. I greatly appreciate your time and consideration in this matter, and I am looking forward to hearing from you.

With respect,
Michele Jones
Michele Jones CASA ED

ISSUE:

Resolution to Accept and Appropriate Insurance Proceeds from VaCorp Risk Management for Repairs ($22,494)

BACKGROUND:

The County has received $22,494 in insurance proceeds for repairs to a Sheriff's Department vehicle. The insurance proceeds need to be accepted and appropriated to the Risk Management Fund budget for FY 2020-21.

The departments have requested that these insurance proceeds received be budgeted to the line item that will allow the County vehicle repairs and property replacement. Any additional budget amount required would be done through the Department's existing available budget.

Fleet Repairs -Solid Waste	$ 14,340	VaCorp
Repairs & Maintenance - Solid Waste	$ 7,122	VaCorp
Fleet Repairs -Sheriff's Office	$ 1,032	VaCorp
	$ 22,494	

BUDGETARY IMPACT:

Adoption of the resolution will increase the revenues and expenditures of the FY 2020-21 General Fund budget. Department budgets will be increased by the amount of insurance proceeds received in order to accomplish repairs to the vehicle.

RECOMMENDATION:

Adopt the resolution to accept and appropriate insurance proceeds and authorize department budget line items to be increased by the amount of the insurance proceeds to repair County vehicles and replace County property.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/11/2021

RESOLUTION TO AMEND THE FY 2020-21 OPERATING BUDGET & APPROPRIATE FUNDING FOR REPAIRS AND REPLACEMENT OF COUNTY PROPERTY FROM INSURANCE PROCEEDS

WHEREAS, the County of Isle of Wight, Virginia has received insurance proceeds from VACorp Risk Management for damaged County vehicles and property; and,

WHEREAS, the Board of Supervisors of the County of Isle of Wight, Virginia desires to amend the FY 2020-2021 General Fund budget in the amount of $22,494 for the repair of damaged County vehicles and replacement of damaged County property; and,

WHEREAS, the Board of Supervisors needs to appropriate funding in the amount of $22,494 from insurance proceeds to the General Fund for the repair of damaged County vehicles and replacement of damaged County property.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2020-21 budget is hereby amended and funding in the amount of twenty two thousand four hundred ninety four dollars $22,494 is appropriated for the repair of damaged County vehicles and replacement of damaged County property.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

ISSUE:

. February 4, 2021 Work Session Minutes
. March 4, 2021 Work Session Minutes
. March 18, 2021 Regular Meeting Minutes

BACKGROUND:

The above-noted minutes are offered for review and adoption by the Board.

BUDGETARY IMPACT:

None

RECOMMENDATION:

Adopt the February 4, 2021 Work Session Minutes; the March 4, 2021 Work Session Minutes; and, the March 18, 2021 Minutes

ATTACHMENTS:

Description	Type	Upload Date
February 4, 2021 Work Session Minutes	Cover Memo	4/26/2021
March 4, 2021 Work Session Minutes	Cover Memo	5/4/2021
March 18, 2021 Regular Meeting Minutes	Cover Memo	5/14/2021

WORK SESSION OF THE ISLE OF WIGHT COUNTY BOARD OF SUPERVISORS HELD IN THE ROBERT C. CLAUD, SR. BOARD ROOM OF THE ISLE OF WIGHT COUNTY COURTHOUSE LOCATED AT 17090 MONUMENT CIRCLE, ISLE OF WIGHT, VIRGINIA ON THURSDAY, THE FOURTH DAY OF FEBRUARY IN THE YEAR TWO THOUSAND AND TWENTY ONE

PRESENT:

Richard L. Grice, Smithfield District, Chairman
Don G. Rosie, II, Carrsville District, Vice-Chairman (via electronically from Indian Beach, North Carolina)
Rudolph Jefferson, Hardy District
William M. McCarty, Newport District
Joel C. Acree, Windsor District

ALSO IN ATTENDANCE:

Robert W. Jones, Jr., County Attorney
Randy R. Keaton, County Administrator
Donald T. Robertson, Assistant County Administrator
Carey Mills Storm, Clerk

CALL TO ORDER

Chairman Grice called the work session of the Board of Supervisors to order at 6:00 p.m.

//

Assistant County Administrator Robertson delivered the invocation and led the Pledge of Allegiance.

//

County Attorney Jones advised that pursuant to State Code and the Board's by-laws, a Board member can participate remotely in a meeting if a physical quorum is assembled and if the member has requested and notified the Chairman that he wishes to appear remotely/electronically. He advised that Vice-Chairman Rosie

will be participating electronically due to a work obligation which will require him to state the nature of his absence and the remote location from which he is participating.

Vice-Chairman Rosie advised that he will be participating electronically from Indian Beach, North Carolina due to a work obligation.

Supervisor Acree moved that Vice-Chairman Rosie be authorized to participate electronically in the meeting. The motion was adopted (4-0) with Supervisors Acree, McCarty, Jefferson and Grice voting in favor of the motion and no Supervisor voting against the motion.

Vice-Chairman Rosie thereafter joined the meeting.

APPROVAL OF THE AGENDA

Supervisor Jefferson moved that the agenda be adopted as presented. The motion was adopted unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

Chairman Grice read a statement into the record pertaining to COVID-19 advising that the Health Department will be providing 1,000 doses of Moderna vaccine to residents in the Western Tidewater area age 65 and older and that the vaccines will be provided by appointment only on Wednesday, February 10, 2021 from 9:30 a.m. until 6:00 p.m. at the Eastern Baptist Church located in Suffolk, Virginia.

COUNTY ADMINISTRATOR'S REPORT

County Administrator Keaton provided an update on the COVID-19 vaccine rollout in the Western Tidewater area related to doses administered by locality of residence; doses administered last week; and, scheduling etiquette.

//

David Smith, Director of Parks & Recreation, provided an update on the Blackwater River Park operation and plans relative to public access.

//

County Administrator Keaton provided an overview of the proposed plans for expansion of the Windsor Library building to address the overcrowded conditions and lack of programming space at that facility. The Board was apprised that the Town owns the land and the County owns the building and that staff is currently working with the Town to update the existing agreement.

//

County Attorney Jones referred to the draft letter in the agenda sent on behalf of the citizens of Isle of Wight County expressing their strong support for House Bill 2322/Senate Bill 1469 which would establish the opioid abatement authority to ensure the fair and orderly distribution of opioid litigation recoveries to local and state governments.

Supervisor McCarty moved that the Chairman be authorized to execute the letter of support for HB2322 and SB1469 for the establishment of the opioid abatement authority. The motion was adopted unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

//

County Administrator Keaton addressed the Board regarding the potential implementation of a County tax on cigarettes.

Chairman Grice requested that staff return to the Board after the General Assembly ends with a recommendation as to how the Board should proceed before taking action to implement a cigarette tax.

County Administrator Keaton stated a 1% sales tax which can only be used for school construction or capital needs would require a referendum, and, if passed, would generate $2.3 to $2.4 million which could take the place of the $.04 property tax proposed to pay the County's debt service payments.

Chairman Grice directed that additional taxing authority in the form of a cigarette tax, plastic bag tax and sales and use tax be placed on the November ballot and

that staff produce documents to inform the public and make presentations to the various civic organizations.

//

County Administrator Keaton addressed the concern with an ever-increasing amount of trash along the roadways and advised that the General Assembly is currently considering legislation to increase penalties for littering.

County Attorney Jones advised that the County is currently at the harshest penalty under the law for littering or having trash blown out of the vehicle which carries a minimum punishment of a $250 fine up to a $2,500 fine and up to twelve months in jail.

The consensus of the Board was that if the County can directly benefit from the legislation currently under consideration by the General Assembly, staff should proceed to obtain the effective tools related to the enforcement of litter in terms of hiring a licensed enforcement officer who would specialize in investigating illegal dumps or partnering with VDOT to install cameras in certain locations targeted as high volume trash areas.

//

Assistant County Administrator Robertson reported that the Monument Task Force discussed and listed the following methods of contextualization as options; however, no consensus or agreement was reached by the Task Force as to any priority or preference of the options:

1. Erect another monument of equal size and equal height to memorialize all who died in war
2. Erect a statue in recognition of the 36th United States Colored Infantry Regiment
3. Make the current monument all-inclusive
4. Erect granite monuments in a semi-circle with each portion of granite providing historical information

5. Erect additional statues of other notable individuals (such as Rev. Dr. Martin Luther King, Jr.) of the same height and size as the current monument
6. Add simple signage around the current statue with QR codes with historical information visitors could read on their own electronic devices

Staff was requested to investigate and report back to the Board the number of monuments owned by local governments and that staff continue to take under consideration any other options should the relocation of the monument from the Courthouse complex to the Town of Windsor cemetery not occur.

//

Amy Ring, Community Development Director, briefed the Board on staff's efforts to identify and conduct outreach to key stakeholders for the anticipated study on senior citizens in the community which will identify steps the County can take to ensure its residents can age successfully in the community. The initial step will be to survey residents on their top concerns with aging in the County as well as their future lifestyle priorities. The next step will be for the stakeholder work group to convene and develop policy recommendations to better direct County actions and decisions as well as guide capital investments to maximize the accessibility in the County to persons of all ages, ability levels and socioeconomic groups. She solicited the Board's assistance in identifying those individuals that may be willing to participate in the stakeholders' group and advised that the Commission on Aging members did offer themselves as a potential stakeholder group.

Chairman Grice shared with the Board that the Commission on Aging recently formed a subcommittee of that group that will be submitting their recommendations in terms of budgeting items to County Administrator Keaton for this budget period.

Supervisor McCarty moved the subcommittee be formed out of the Commission on Aging membership. The motion was adopted unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

//

Ms. Ring shared with the Board the results of the space needs analysis and timeline for the Community Development Department initiated to identify ways to provide a more secure, user-friendly and service-oriented space and to increase staff efficiency in an appropriate work environment. It is designed for social distancing and public health recommendations are incorporated in the recommended layout. Additional office space is also needed on the first floor to allow for more efficient workflow, meet social distancing requirements, and provide for individual concentration. Reorganization of the Lobby allows for easy public access to the service counters while maintaining controlled access to the Department to address current security concerns.

//

Supervisor McCarty recommended stackable chairs for the Board Room be done in conjunction with the expansion of the Community Development office space.

County Administrator Keaton offered to obtain information on stackable chairs for the Board Room and bring back to the Board at its next regular meeting.

//

County Attorney Jones requested a closed meeting pursuant to Section 2.2-3711(A) of the Code of Virginia, for the limited purpose of: A discussion regarding the disposition of County owned real property located within the town limits of Smithfield where discussing of the same in an open meeting would adversely affect the bargaining position or negotiating strategy of the Board, pursuant to subsection 3; and, consultation with legal counsel employed by the Board regarding specific legal matters requiring the provision of legal advice by such counsel, namely the requirements of the Virginia Freedom of Information Act pertaining to meetings pursuant to subsection 8.

Upon motion of Supervisor McCarty and all voting in favor (5-0), the Board entered the closed meeting for the reasons stated by County Attorney Jones.

Upon motion of Supervisor McCarty and all voting in favor (5-0), the Board reconvened into open meeting.

County Attorney Jones reminded the Board that in accordance with Section 2-10(G) of the Board's Rules & Procedure, all those who participated in the closed meeting are reminded that all matters discussed in closed meeting are to remain confidential, as provided under the Virginia Freedom of Information Act, and that such matters as were discussed in closed meeting should not be acted upon or discussed in public by any participant unless and until a public, formal action of the Board of Supervisors is taken on that particular subject matter.

Upon motion of Supervisor Jefferson and all voting in favor (5-0), the following Resolution was adopted:

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of Supervisors has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and,

WHEREAS, Section 2.2-3712(D) of the Code of Virginia requires a certification by this Board of Supervisors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board of Supervisors.

VOTE

AYES: Acree, Grice, Jefferson, McCarty. Rosie

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: 0

ADJOURNMENT

At 10:05 p.m., Chairman Grice declared the meeting adjourned.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

WORK SESSION OF THE ISLE OF WIGHT COUNTY BOARD OF SUPERVISORS HELD IN THE ROBERT C. CLAUD, SR. BOARD ROOM OF THE ISLE OF WIGHT COUNTY COURTHOUSE LOCATED AT 17090 MONUMENT CIRCLE, ISLE OF WIGHT, VIRGINIA ON THURSDAY, THE FOURTH DAY OF MARCH, IN THE YEAR TWO THOUSAND AND TWENTY ONE

PRESENT:
Richard L. Grice, Smithfield District, Chairman
Don G. Rosie, II, Carrsville District, Vice-Chairman
Rudolph Jefferson, Hardy District
William M. McCarty, Newport District
Joel C. Acree, Windsor District

ALSO IN ATTENDANCE:
Mandy M. Rogers, Attorney
Randy R. Keaton, County Administrator
Donald T. Robertson, Assistant County Administrator
Carey Mills Storm, Clerk

CALL TO ORDER

Chairman Grice called the Board of Supervisors' work session to order at 6:00 p.m.

INVOCATION

Steve Reynolds, Elder, Hope Presbyterian Church, delivered the invocation and led the Pledge of Allegiance.

APPROVAL OF AGENDA

Supervisor McCarty moved that the agenda be adopted with the addition of an item concerning the formation of a redistricting task force. The motion was adopted with Supervisors Acree, Rosie, Acree, McCarty and Jefferson voting in favor (5-0) and no Supervisor voting against the motion.

COUNTY ADMINISTRATOR'S REPORT

Jim Carroll, Executive Director, Small Business Development Center (SBDC), briefed the Board on the Center's most recent accomplishments and what is to be expected moving forward. Statistics for the CY2020 Client Demographics; Economic Injury Disaster Loans; Paycheck Protection Program; website; StartWheel website; Economic Aid Act of 2020; COVID recovery and resiliency; challenges for the upcoming year; initiatives; and, next year's goals were reviewed with the Board.

//

Tommy Catlett, Franklin Residency, VDOT, provided information on the following:

. land use permits/plans
. work orders
. mowing efforts
. Adopt a Highway
. projects (LAP/Smart Scale/Maintenance)

The following concerns were relayed by the Board to Mr. Catlett for handling:

. cleaning out of the culvert and ditches at Whitehead Farm Lane
. repair shoulder at Longwood Drive and Whitehead Farm Lane
. repair potholes on Smith Neck Road
. contractor blocking travel lane at Route 17 at Bartlett
. countywide trash pick-up
. repairs to ditches at Airway Shopping Center

Jamie Oliver, Transportation Planner, provided an update on turn lanes at Routes 258 and 460.

//

County Administrator Keaton extended an invitation to the Board from the School Board to participate in the presentation of a resolution congratulating the Smithfield High School basketball team for winning the 2020-21 Virginia High School League Class 4 State Basketball Championship.

Vice-Chairman Rosie moved to adopt the following resolution:

RESOLUTION TO RECOGNIZE AND CONGRATULATE THE SMITHFIELD HIGH SCHOOL BASKETBALL TEAM

WHEREAS, the Smithfield High School Packers Boys Basketball Team won the 2020-2021 Virginia High School League Class 4 State Basketball Championship; and,

WHEREAS, the Packers Basketball Team advanced to the State Championship by also winning the Virginia High School League Region A Championship; and,

WHEREAS, the Packers Basketball Team finished the 2020-2021 basketball season undefeated with a record of 11 wins and no losses; and,

WHEREAS, this is the first State Basketball Championship in the 115- year history of Smithfield High School; and,

WHEREAS, the Board of Supervisors desires to recognize and congratulate the Smithfield High School Packers Boys Basketball Team for its monumental achievement.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED that the Board of Supervisors of the County of Isle of Wight, Virginia recognizes and congratulates the Smithfield High School Packers Boys Basketball Team for outstanding achievement in winning the 2020-2021 Virginia High School League Class 4 State Basketball Championship.

The motion was adopted with Supervisors Acree, Rosie, Acree, McCarty and Jefferson voting in favor (5-0) and no Supervisor voting against the motion.

//

Michael Etheridge, Public Works Solid Waste Manager, provided an overview of the following pertaining to refuse and recycling center areas: The recycling single stream program; residential waste tonnage; residential yard waste tonnage; residential construction debris tonnage; refuse and recycling center patrons; a

new brochure; contracted staff; the paperless data collection project; and, the Jones Creek convenience center site.

//

Following a recess, David Smith, Director of Parks & Recreation, advised that the cancellation of the 2020 County Fair due to the pandemic had presented an opportunity for staff to consider infrastructure needs at the Fairgrounds which would fit in with the landscape and outline of the existing grounds. He advised that the Fair Committee Chairman is present to discuss his findings relative to quotes for pole barn buildings which would eliminate the need for tent rentals which, in the past, cost approximately $36,000.

Danny Byrum, Chairman, Fair Committee, disseminated and reviewed a proposal received involving two options for building pole barns at the Fairgrounds.

The consensus of the Board was for staff to move forward with the proposal (three building option and one building option) and that the Board be provided with an ariel photo showing the location of the proposed buildings.

//

Amy Ring, Director of Community Development, reviewed a proposed housing assessment report on workforce housing involving a grant offered by the Virginia Peninsula Association of Realtors which would be at no cost to the County.

The consensus of the Board was for staff to move forward with obtaining the assessment report which will provide data and a direction for moving forward.

//

Assistant County Administrator Robertson provided an overview of the COVID-19 County vaccine rollout in Western Tidewater related to vaccine doses administered by locality of residence; the Western Tidewater Health Department independent vaccine providers; community vaccination centers; the Statewide pre-registration system; and, the address for registering.

//

County Administrator Keaton displayed the new signage for the Development Service Districts.

//

County Administrator Keaton informed the Board of a need for three fleet vehicles for the Sheriff's Department which will be funded from last year's CARES Act.

The consensus of the Board was for staff to move forward with purchasing three new vehicles for the Sheriff's Department.

//

Chairman Grice asked the Board to be prepared to discuss its thoughts at its March 18, 2021 regular meeting on the formation of a redistricting task force related to the different aspects of redistricting.

County Administrator Keaton informed the Board that the Registrar has advised that due to the delay in local redistricting data by the Census Bureau, it will not be possible to conduct a redistricting in time for the 2021 election. He stated there are two separate issues at hand. The first is the mathematical exercise of redrawing the district boundaries which can be accomplished by the County's GIS personnel and equates to the number of individuals in the County divided by five with one fifth going in each district. The second issue is being discussed by the Isle of Wight Citizens Association and involves changing the number of members on the Board, which is not a redistricting issue, but rather changing the County's electoral system and which he recommends the hiring of an expert in election law who can provide the Board with viable options.

ADJOURNMENT

At 10:00 p.m., Chairman Grice declared the meeting adjourned.

_____

Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

REGULAR MEETING OF THE ISLE OF WIGHT COUNTY BOARD OF SUPERVISORS HELD IN THE ROBERT C. CLAUD, SR. BOARD ROOM OF THE ISLE OF WIGHT COUNTY COURTHOUSE LOCATED AT 17090 MONUMENT CIRCLE, ISLE OF WIGHT, VIRGINIA ON THURSDAY, THE EIGHTEENTH DAY OF MARCH IN THE YEAR TWO THOUSAND AND TWENTY ONE

PRESENT:
Richard L. Grice, Smithfield District, Chairman
Don G. Rosie, II, Carrsville District, Vice-Chairman
Rudolph Jefferson, Hardy District
William M. McCarty, Newport District
Joel C. Acree, Windsor District

ALSO IN ATTENDANCE:
Robert W. Jones, Jr., County Attorney
Randy R. Keaton, County Administrator
Donald T. Robertson, Assistant County Administrator
Carey Mills Storm, Clerk

CALL TO ORDER

Chairman Grice called the regular Board of Supervisors' meeting to order at 5:00 p.m.

APPROVAL OF AGENDA

Supervisor McCarty moved that the agenda be adopted as presented. The motion was adopted unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion

CLOSED MEETING

The following matters were identified for discussion in closed meeting by County Attorney Jones: A discussion regarding the appointment of specific appointees to County boards, committee or authorities as set forth in the agenda, pursuant to subsection 1; a discussion regarding the sale or leasing of publicly held property, namely, tax map parcels or portions of tax map parcels 04B-03-K007, 23-01-014, 21A-01-184, 21-01-083 and 38-01-034 where discussion in an open meeting

would adversely affect the bargaining position or negotiating strategy of the Board, pursuant to subsection 3; consultation with legal counsel regarding actual litigation regarding stormwater outfall where such consultation would adversely affect the negotiating or litigation posture of this public body pursuant to subsection 7; and, consultation with legal counsel employed by the Board regarding specific legal matters requiring the provision of legal advice by such counsel, namely the provisions of a MOU regarding the Windsor Town Center pursuant to subsection 8.

Upon motion of Supervisor McCarty and all voting in favor (5-0), the Board entered the closed meeting for the reasons stated by County Attorney Jones.

Upon motion of Supervisor McCarty and all voting in favor (5-0), the Board reconvened into open meeting.

County Attorney Jones reminded the Board that in accordance with Section 2-10(G) of the Board's Rules & Procedure, all those who participated in the closed meeting are reminded that all matters discussed in closed meeting are to remain confidential, as provided under the Virginia Freedom of Information Act, and that such matters as were discussed in closed meeting should not be acted upon or discussed in public by any participant unless and until a public, formal action of the Board of Supervisors is taken on that particular subject matter.

Upon motion of Supervisor Jefferson and all voting in favor (5-0), the following Resolution was adopted:

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of Supervisors has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and,

WHEREAS, Section 2.2-3712(D) of the Code of Virginia requires a certification by this Board of Supervisors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors hereby certifies that,

to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board of Supervisors.

VOTE

AYES: Acree, Grice, Jefferson, McCarty. Rosie

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: 0

INVOCATION

Pastor Dan Harsey, CenterPoint Community Church, delivered the invocation and led the Pledge of Allegiance.

CITIZENS' COMMENTS

No one appeared and spoke.

CONSENT AGENDA

A. Resolution to Amend the FY2020-21 Grant Fund Budget and Appropriate Funding for the Department of Criminal Justice Services Violence Against Women's Act Grant ($23,096 with local match of $7,699)

B. Resolution to Amend the FY2020-21 Budget and Appropriate Funding from the Virginia Department of Education for School Security Grant ($151,380)

C. Seventh Amended Charter Agreement of the Hampton Roads Workforce Council

D. 2020 Planning Commission Annual Report

E. Employment Agreement (County Attorney)

F. Minutes
- November 19, 2020 Regular Meeting Minutes
- December 10, 2020 Work Session Minutes
- December 10, 2020 Regular Meeting Minutes

Supervisor McCarty moved that the Consent Agenda be approved as presented. The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

REGIONAL AND INTER-GOVERNMENTAL REPORTS

No reports were offered.

APPOINTMENTS

Supervisor Acree motioned to reappoint Pat Humphries to serve on the Tidewater Emergency Medical Services. The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

Chairman Grice motioned to reappoint James Collins to serve on the Economic Development Authority representing the Smithfield District. The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

Chairman Grice motioned to reappoint Tim Hillegass to serve on the Economic Development Authority representing the Town of Smithfield. The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

Chairman Grice motioned to reappoint James Wesley Brown representing the Smithfield District on the Wetlands Board. The motion carried unanimously (5-

0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

SPECIAL PRESENTATIONS

Judy Winslow, Director of Tourism, provided an overview of the Smithfield/Isle of Wight Convention and Visitors Bureau 2020 Annual Report.

COUNTY ATTORNEY'S REPORT

County Attorney Jones provided an overview of the Planning Commission's amended bylaws which incorporates language to allow for remote participation of Commission members who are unable to appear in person due to a personal or medical reason.

Supervisor McCarty moved that the proposed amendment containing the statutorily required language to allow for remote participation of Commission members who are unable to appear in person due to personal or medical reasons be adopted. The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

PUBLIC HEARINGS

Resolution to Amend the FY 2020-21 Operating Budget and Appropriate Funding for 2020A General Obligation Bond Capital Projects ($34,733,997)

County Administrator Keaton presented Smithfield Volunteer Fire Department's request to move forward earlier with placing the order for the Smithfield Ladder truck which is scheduled for funding not until July of 2022 citing rising prices and an influx of truck orders.

Chairman Grice called for persons to speak in favor of or in opposition.

No one appeared and spoke.

Chairman Grice closed the public hearing and called for comments from the Board.

Supervisor Jefferson moved that the following Resolution be adopted:

RESOLUTION TO AMEND THE FY 2020-2021 OPERATING BUDGET AND APPROPRIATE FUNDING FOR 2020A GENERAL OBLIGATION BOND CAPITAL PROJECTS

WHEREAS, the Board of Supervisors approved the FY 2021-30 Capital Improvements Program; and,

WHEREAS**,** the Board of Supervisors approved the issuance of a General Obligation Bond to fund Capital Improvements within the FY 2021-30 Capital Improvements Program; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 Capital Fund Budget for the Cost of Issuance, Underwriting and the Capital Projects approved for Bond funding in the FY 2021-30 Capital Improvements Program budget, as amended September 17, 2020, in the amount of $34,733,997 (thirty-four million seven hundred thirty-three thousand nine hundred ninety-seven); and,

WHEREAS, the Board of Supervisors must appropriate funding for the Capital Project Fund Budget with the intention that this funding be assigned to these projects and carried forward to future Fiscal Years until completion.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2020-2021 Budget is hereby amended and funds appropriated in the amount of $34,733,997 (thirty-four million seven hundred thirty-three thousand nine hundred ninety-seven) for the 2020A General Obligation Bond funded Capital Projects.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

COUNTY ADMINISTRATOR'S REPORT

County Administrator Keaton advised that an application for individuals desiring to serve on Boards/Committees/Commissions is now on the County's website.

Assistant County Administrator Robertson provided a review of the following pertaining to the COVID-19 vaccine rollout in Western Tidewater: The overall Covid-19 count for Isle of Wight; 7-day rolling averages; vaccine doses administered by locality or residence; vaccine rollout; and, the statewide pre-registration system

UNFINISHED/OLD BUSINESS

Gerald H. Gwaltney, Commissioner of Revenue, highlighted SB1326 which extends cigarette taxing authority to counties beginning July 1, 2021. Such legislation will allow for local administration of tax or for the creation of a regional board which is required to consist of six localities. The legislation caps the maximum rate of $.40 per pack with estimated revenue in the amount of $300,000. The implementation timeline was provided which shows that consumers could begin paying the tax by September of 2021. He recommended the Board authorize the County Attorney to draft an ordinance for consideration by the Board at its next meeting.

Supervisor McCarty inquired what additional expenses would be expected in order to oversee this on a local level.

Commissioner Gwaltney responded he would estimate the total cost for administering the program would be between $20,000 and $25,000 including benefits. Stamps for one year would be another $4,700.

Supervisor McCarty advised that he has been contacted by numerous businesses who have expressed their concern that customers currently traveling to the County to purchase cigarettes would no longer do so because the tax imposed by the County would equal the tax charged in surrounding areas.

It was the consensus of the Board that it would not be wise to exceed the tax in the Town of Windsor and that the funds be earmarked for debt service. Supervisor McCarty advised that he is not in favor of more than a $.20 tax per pack of cigarettes and Supervisor Jefferson recommended the tax be at least $.30 per pack.

Supervisor Jefferson motioned to authorize the County Attorney to draft an ordinance for consideration at the Board's April meeting. The motion carried unanimously (4-1) with Supervisors Acree, Grice, Jefferson and Rosie voting in favor of the motion and Supervisor McCarty voting against the motion.

NEW BUSINESS

Michelle Clark, Director of Human Resources, provided an overview of this year's health insurance renewal and requested the Board to adopt a resolution setting the health care rates for 2022.

Supervisor McCarty moved that the following Resolution be adopted:

RESOLUTION TO APPROVE THE EMPLOYEE HEALTH INSURANCE PLAN OFFERINGS FOR FISCAL YEAR 2021-2022

WHEREAS, the next Employee Health Insurance Plan Year takes effect July 1, 2021; and,

WHEREAS, the County participates in The Local Choice Health Insurance Program through Anthem and offers three plans; and,

WHEREAS, The Local Choice Anthem Key Advantage 250 Plan, Key Advantage 500 Plan, and High Deductible Health Plan (with Health Savings Account) are recommended to the Board of Supervisors as the three plan offerings available for the plan year beginning July 1, 2021.

NOW, THEREFORE, BE IT RESOLVED that the Health Insurance Plan offerings of The Local Choice Anthem Key Advantage 250 Plan, Key Advantage 500 Plan, and High Deductible Health Plan (with Health Savings Account) are available for employees with employer and employee contribution rates effective July 1, 2021 as referenced in the attached exhibit.

BE IT FURTHER RESOLVED that eligibility for participation in the Health Insurance Plan offerings is as follows: All regular full-time employees of the

County, to include Appointees and Registrar, as well as elected officials to include Constitutional Officers and Board of Supervisors members, as well as local state-supported employees of the Isle of Wight Department of Social Services.

//

Pat Humphries, Chief of Emergency Services, presented a request from the Isle of Wight Volunteer Rescue Squad for the purchase of a 2022 Horton Model 603 F ambulance.

Supervisor McCarty moved that the following Resolution be adopted:

RESOLUTION TO AMEND THE FY 2020-2021 BUDGET AND APPROPRIATE FUNDING FOR ADDITIONAL COST OF AMBULANCE PURCHASE ISLE OF WIGHT VOLUNTEER RESCUE

WHEREAS, the Board of Supervisors has approved funding for the purchase of an ambulance for the Isle of Wight Volunteer Rescue Squad in the amount of two hundred thirty-five thousand dollars ($235,000); and,

WHEREAS**,** the selected, equipped vehicle exceeds the budgeted appropriation by four thousand six hundred thirty-seven dollars ($4,637); and,

WHEREAS, the Isle of Wight Volunteer Rescue Squad has agreed to issue a check to Isle of Wight County for the additional cost of the purchase; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 Capital Project Fund Budget in the amount of four thousand six hundred thirty-seven dollars ($4,637) from the Isle of Wight Volunteer Rescue Squad for the purchase of the ambulance; and,

WHEREAS**,** the Board of Supervisors needs to appropriate four thousand six hundred thirty-seven dollars ($4,637) for the purchase of the ambulance.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that the FY 2020-2021 budget is hereby amended, and funds appropriated in the amount of four thousand six hundred thirty-seven dollars ($4,637)

or so much as shall be received from the Isle of Wight Volunteer Rescue for the additional cost of the ambulance purchase.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

//

Amy Ring, Community Development Director, presented an overview of the Community Development permitting activity.

Supervisor McCarty moved that the following Resolution be adopted:

RESOLUTION TO AMEND THE FY 2020-2021 OPERATING
BUDGET AND APPROPRIATE FUNDING TO
GENERAL FUND AND STORMWATER OPERATING BUDGETS
FOR NEW PERMITTING AND INSPECTIONS POSITIONS

WHEREAS, the Board of Supervisors has authorized the creation of a new Permit Technician and a new Codes Compliance Inspector II/Plans Examiner positions in order to address the increased permitting, plan review, and inspections needs of the County's growing population; and,

WHEREAS, the annual personnel costs ($148,164) and supplies, equipment, and vehicle costs ($36,336) will be funded by the increase in permitting revenue, and stormwater fees in current and future budget years; and,

WHEREAS**,** funding in the amount of seventy-three thousand three hundred seventy-five dollars ($73,375) needs to be budgeted and appropriated for personnel and equipment expenses and increased permitting revenues to the FY 2020-2021 General Fund and Stormwater Operating Budgets.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2020-2021 budget is hereby amended and funds appropriated in the amount of seventy-three thousand three hundred seventy-five dollars ($73,375) to the appropriate line item(s) in the FY 2020-2021 Budget of Isle of Wight County.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

The motion carried unanimously (5-0) with Supervisors Acree, Grice, McCarty, Jefferson and Rosie voting in favor of the motion and no Supervisors voting against the motion.

ADJOURNMENT

At 7:45 p.m., Chairman Grice declared the meeting adjourned.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

BACKGROUND:

The Board of Supervisors has previously directed that an opportunity be provided for monthly status briefings from Board members who serve as representatives on various regional committees and authorities on behalf of the County.

BUDGETARY IMPACT:

None

RECOMMENDATION:

Receive the report.

ATTACHMENTS:

Description	Type	Upload Date
Regional Reports	Cover Memo	1/24/2020

2020 BOARD MEMBER REGIONAL REPRESENTATIVE

(Appointed by Board Vote)

Organization	Member	Term Expires
Hampton Roads Military Federal Facilities Alliance	Rosie	No Set Term
Hampton Roads Planning District Commission	McCarty	No Set Term
	Keaton	No Set Term
Hampton Roads Transportation Accountability Commission	McCarty	No Set Term
Hampton Roads Transportation Planning Organization	McCarty	No Set Term
	Keaton	No Set Term
Southeastern Public Service Authority	Keaton	December 2021
	Etheridge/Alternate	December 2021
Western Tidewater Regional Jail Authority	Jefferson	No Set Term
	McCarty	No Set Term
	Keaton	No Set Term
Western Tidewater Water Authority	Grice	June 2022
	Acree	June 2022
	Jones/Alternate	June 2022

Regional Reports

Updated/January 2020

BACKGROUND:

Board members will consider and make appointments of individuals to various local and region organizations as noted on the Appointments Page.

BUDGETARY IMPACT:

None

RECOMMENDATION:

Appoint individuals to various local and region organizations as noted on the Appointments Page.

ATTACHMENTS:

Description	Type	Upload Date
Appointments Page	Backup Material	4/27/2021
Vaughan - Reappointment Letter	Cover Memo	5/10/2021

BOARDS/COMMISSIONS/COMMITTEES

Boards/Commissions/Committees	Appointees	Contact	District	Expiration	
Blackwater Regional Library	Conway Henderson	238-9890	Windsor	June	2021
Blackwater Regional Library	Pam Vaughan	651-0318	Carrsville	June	2021
Chamber of Commerce	Don Robertson			July	2021
Paul D. Camp Community College	Benjamin Vaughan	242-4364		June	2021
Historical Architectural Review Committee	Durwood Scott	242-6528	Windsor	September	2020
Southeastern Tidewater Opportunity Project	Hazel Edwards	357-2761		March	2021
Board of Zoning Appeals	Gwendolyn Sykes	357-2104	Hardy	May	2021

Carey Mills Storm

From: Cathy Cutchins <ccutchins@pdc.edu>
Sent: Wednesday, May 5, 2021 11:16 AM
To: Carey Mills Storm
Cc: Corey McCray
Subject: Isle of Wight Representative on Camp Community College Board - Benjamin Vaughan

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Carey,

Mr. Benjamin Vaughan's term as an Isle of Wight representative on the Paul D. Camp Community College Board will expire on June 30, 2021. He is eligible for reappointment for another term (7/1/2021 – 6/30/2025). He stated that he is willing to serve another term. Please let me know if Mr. Vaughan is reappointed by the Board of Supervisors.

Thank you,

Cathy T. Cutchins
Executive Assistant to the President
Paul D. Camp Community College
100 N College Drive, Franklin, VA 23851
ccutchins@pdc.edu| (W) (757) 569-6712
QEP at PDC **"15 to FINISH: Your TICKET to SUCCESS!"**

ISSUE:

VDOT Presentation - Tommy Catlett

BACKGROUND:

VDOT will provide an updated on Residency operations, including staffing, funding, and operational work flow.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

For the Board's information.

ISSUE:

Staff Update on COVID-19 Vaccine Rollout in Western Tidewater

BACKGROUND:

The Western Tidewater Health District is administering the COVID-19 vaccine to Isle of Wight County employees and residents. Lack of sufficient quantity of the vaccine on a consistent basis is significantly impacting the ability of health district staff to vaccinate more people sooner.

Staff will provide information regarding current vaccination efforts/challenges.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

For the Board's information.

ISSUE:

Resolution to Designate May 16-23, 2021 as Emergency Medical Services Week

BACKGROUND:

In November 1974, President Gerald Ford announced and authorized the first National Emergency Medical Services (EMS) Week to celebrate the important work of individuals who work on the medical front line. This year, it's celebrated from May 16 to May 23. The week gives Emergency Medical Services (EMS), and those who would like to credit them, a chance to recognize their hard work in potentially fatal situations daily. Whether an accident, a national emergency, or a terrorist act, the EMS work quickly and efficiently to save lives.

The Board may wish to designate May 16-23, 2021 as EMS Week.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Adopt a resolution to Designate May 16-23, 2021 as Emergency Medical Services Week.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/20/2021

RESOLUTION TO DESIGNATE THE WEEK OF MAY 16 - 22, 2021, AS EMERGENCY MEDICAL SERVICES WEEK

WHEREAS, emergency medical services (EMS) is a vital public service; and,

WHEREAS, the members of EMS teams are ready to provide lifesaving care to those in need 24 hours a day, seven days a week; and,

WHEREAS, access to quality emergency care dramatically improves the survival and recovery rate of those who experience sudden illness or injury; and,

WHEREAS, EMS has grown to fill a gap by providing important, out of hospital care, including preventative medicine, follow-up care, and access to telemedicine; and,

WHEREAS, the EMS system consists of first responders, emergency medical technicians, paramedics, emergency medical dispatchers, firefighters, police officers, educators, administrators, pre-hospital nurses, emergency nurses, emergency physicians, trained members of the public, and other out of hospital medical care providers; and,

WHEREAS, the members of EMS teams, whether career or volunteer, engage in thousands of hours of specialized training and continuing education to enhance their lifesaving skills; and,

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the County of Isle of Wight, Virginia recognize the value and the accomplishments of EMS providers and hereby designate the week of May 16-22, 2021, as Emergency Medical Services Week.

Adopted this 20th day of May 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____

Robert W. Jones Jr., County Attorney

ISSUE:

Ordinance for Real Estate and Personal Property Tax Exemption from Smithfield Recreation Association

BACKGROUND:

The Code of Virginia (Section 58.1-3651) grants authority to the Board of Supervisors to exempt from taxation any real and personal property owned by organizations which use it exclusively for religious, charitable, patriotic, historical, benevolent, cultural, or public park and playground purposes.

Article IV of Isle of Wight County Policy Manual outlines the procedural process and guidelines for qualifying nonprofit organizations to request exemption from real and personal property taxation in the County. An application from Smithfield Recreation Association has been submitted for the Board's consideration.

Should the Board grant the requested tax-exempt status to the organization, the exemption is valid for the next July 1st tax year and all future years unless revoked in accordance with the Code of Virginia.

BUDGETARY IMPACT:

The current annual fiscal impact is $3,452.

RECOMMENDATION:

After a public hearing, adopt an ordinance amendment for personal property tax exemption for Smithfield Recreation Association.

ATTACHMENTS:

Description	Type	Upload Date
Ordinance	Ordinance	5/21/2021
Application from Smithfield Recreation Association	Backup Material	4/8/2021
Correspondence from Commissioner of Revenue	Backup Material	4/8/2021
Tax Exemption Policy	Backup Material	8/9/2017

AN ORDINANCE TO DESIGNATE AS EXEMPT FROM TAXATION ALL REAL AND PERSONAL PROPERTY OWNED OR OPERATED BY SMITHFIELD RECREATION ASSOCIATION, INC.

BE IT, AND IT IS HEREBY ORDAINED, by the Board of Supervisors of the County of Isle of Wight, Virginia, to-wit:

That, in accordance with Section 58.1-3651 of the Code of Virginia (1950, as amended), all real and personal property currently owned and operated, or which may be owned and operated in the future, by Smithfield Recreation Association, Inc. is hereby exempt from taxation by Isle of Wight County, Virginia for so long as Smithfield Recreation Association, Inc. continues to use such real and personal property in the furtherance of its operation as a charitable organization and for so long as Smithfield Recreation Association, Inc. remains in compliance with all federal, state and local laws regulations related to the operation of such charitable organizations.

This ordinance shall remain effective as long as Smithfield Recreation Association, Inc. complies with the triennial application process as set forth in the Isle of Wight County Policy Manual in accordance with Section 58.1-36-15 of the Code of Virginia (1950, as amended),

This ordinance shall become effective July 1, 2021.

_____
Richard L. Grice, Chairman
Board of Supervisors

Attest:

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones, Jr., County Attorney

SMITHFIELD RECREATION ASSOCIATION, INC.

Application for Exemption

Real Estate Taxes

TABLE OF CONTENTS

APPLICATION

1) Tax Exempt Status from the IRS
2) ABC License
    - Statement signed by an Officer
3) Compensation Schedule
4) IRS Forms
    - Form 990
5) Statement of Use
6) List of Current Officers
7) All Fictitious Names Filed
8) Current Financial Statements
9) Statement of Funds Received and Percentage
10) Current Articles of Incorporation and Bylaws
11) Statement of Discrimination
12) Services Provided to IOW Citizens
13) Statement of Political Activities
14) Revenue Impact
15) Other Information

APPLICATION

Procedure for Applying for Exempt Status of a Non-Profit Organization

A. Pursuant to subsection 6(a)(6) of Article X of the Constitution of Virginia, on and after January 1, 2003, any county, city, or town may, by designation or classification, exempt from real or personal property taxes, or both, by ordinance adopted by the local governing body, the real or personal property, or both, owned by a nonprofit organization that uses such property for religious, charitable, patriotic, historical, benevolent, cultural, or public park and playground purposes. The ordinance shall state the specific use on which the exemption is based, and continuance of the exemption shall be contingent on the continued use of the property in accordance with the purpose for which the organization is classified or designated. No exemption shall be provided to any organization that has any rule, regulation, policy, or practice that unlawfully discriminates on the basis of religious conviction, race, color, sex, or national origin.

B. Any ordinance exempting property by designation pursuant to subsection A above shall be adopted only after holding a public hearing with respect thereto, at which citizens shall have an opportunity to be heard. The Board of Supervisors shall publish a notice of the public hearing once in the Smithfield Times and The Tidewater News newspapers. The notice shall include the assessed value of the real and tangible personal property for which an exemption is requested as well as the property taxes assessed against such property. The public hearing shall not be held until at least five days after the notice is published in the newspaper. The local governing body shall collect the cost of publication from the organization requesting the property tax exemption. Before adopting any such ordinance, the Board of Supervisors shall consider the following questions:

1. Whether the organization is exempt from taxation pursuant to §501 (c) of the Internal Revenue Code of 1954;

2. Whether a current annual alcoholic beverage license for serving alcoholic beverages has been issued by the Virginia Alcoholic Beverage Control Board to such organization, for use on such property;

3. Whether any director, officer, or employee of the organization is paid compensation in excess of a reasonable allowance for salaries or other compensation for personal services which such director, officer, or employee actually renders;

P.O. Box 80
17090 Monument Circle
Isle of Wight, VA 23397
(757) 365-6204
www.co.isle-of-wight.va.us

4. Whether any part of the net earnings of such organization inures to the benefit of any individual, and whether any significant portion of the service provided by such organization is generated by funds received from donations, contributions, or local, state or federal grants;

5. Whether the organization provides services for the common good of the public; specific consideration will be given to the level of services provided for the common good of the public to citizens of Isle of Wight County. At least a minimum of 50% of the organization services should be provided to citizens of Isle of Wight County. The organization should have been providing services in Isle of Wight County for a minimum of three years.

6. Whether a substantial part of the activities of the organization involves carrying on propaganda, or otherwise attempting to influence legislation and whether the organization participates in, or intervenes in, any political campaign on behalf of any candidate for public office;

7. Whether the organization has rules, regulations, policies, or practices that discriminate on the basis of religious conviction, race, color, sex, or national origin.

8. The revenue impact to the locality and its taxpayers of exempting the property; The County shall assess the County service requirements for the facility requested to be exempted and the financial impact of any exempted tax burden shift to the taxpaying citizens and businesses.

C. Exemptions of property from taxation under this article shall be strictly construed in accordance with Article X, Section 6 (f) of the Constitution of Virginia.

D. "Nothing in this section or in any ordinance adopted pursuant to this section shall affect the validity of either a classification exemption or a designation exemption granted by the General Assembly prior to January 1, 2003, pursuant to Article 2 (§58.1-3606 et seq.), 3 (§58.1-3609 et seq.) or 4 (§58.1-3650 et seq.) of the Code of Virginia or this chapter. An exemption granted pursuant to Article 4 (§58.1-3650 et seq.) of the Code of Virginia or this chapter may be revoked in accordance with the provisions of §58.1-3605.

E. Triennial Application for Exemption; Removal by Local Governing Body

In accordance with §58.1-3605 of the Code of Virginia, organizations receiving exemption from real and/or personal property taxation by the Isle of Wight Board of Supervisors shall be required to file triennially an application as a requirement for retention of the exempt status of the property. Such application shall show the ownership and usage of such property and shall be filed within sixty days preceding the tax year for which such exemption, or the retention thereof, is sought. The requirement to file a triennial application to maintain exempt status shall be written into the ordinance designating an organization as exempt from real and/or personal property taxes.

The Board of Supervisors may submit to the General Assembly a list of those organizations whose property is designated as tax exempt under §58.1-3650.1 et seq. which the local governing body wants to remove from its exempt property list. Legislation including such a list must be introduced no later than the first calendar day of any session of the General Assembly unless requested by the Governor.

F. Application Submission

1. Applications are available in the Commissioner of the Revenue's Office located at 17090 Monument Circle, Suite 113. Please attach all required documents.

2. Return the completed application to the Commissioner of the Revenue's Office, 17090 Monument Circle, Suite 113, Isle of Wight, Virginia 23397 along with a check for the cost of the public hearing advertisements, as specified in the fee schedule of the fiscal year operating budget, and made payable to Treasurer, Isle of Wight County, Virginia.

3. Within 45 business days of receipt of the application, the Commissioner of the Revenue's Office will review the application for completion and notify the organization if additional information is needed then forward it, with any additional information pertinent to the application, to the County Administrator's Office for action of the Board of Supervisors within 45 days after receipt from the Commissioner of the Revenue's Office.

4. The County Administrator's Office will coordinate the placement of the public hearing advertisements in accordance with County Policy. The advertisements will state the date, time, and location of the meeting. ***It is highly recommended that the person(s) completing the application attend the Public Hearing. If such individual(s) cannot be present, the organization should send an authorized representative.***

5. Upon conclusion of the Public Hearing, a prepared ordinance will be introduced for consideration by the Board of Supervisors. If the Board of Supervisors adopts the ordinance for exempt status, the exemption is valid for the next July 1st tax year and all future years unless revoked in accordance with the provision of *Code of Virginia* §58.1-3605.

6. If the Board of Supervisors does not approve the request for exempt status, the organization will be required to continue to file a tangible personal property return and/or continue paying taxes related to real and/or personal property assessments.

7. To be considered for each July 1st, **the application must be received by the Commissioner of the Revenue's Office by April 1**.

8. Approval of the application will provide for exemption for real and personal property tax.

Application for Exemption from Real Estate or Personal Property Taxes for Religious, Charitable, Patriotic, Historical, Benevolent, Cultural, or Public Park and Playground Use

1. **Name of Organization:** Smithfield Recreation Association, Inc.

2. **Property currently owned by:** Smithfield Recreation Association, Inc.

3. **Name of Authorized Agent and Title:** William K. Barlow

4. **Mailing Address:** P.O. Box 23 Smithfield, VA 23431

5. **Contact Number for Authorized Agent:** 757-357-4314

6. **Property Location (include parcel map number and street address):**
22-01-042C & 22-04-000B 4617 Moonefield Drive Smithfield,VA 23430

7. **Description of organization's activities and the services provided to the public. Include in this section any charges for services or receipts of in-kind contributions or gifts:**
SRA is a non-profit organization that offers recreation baseball and softball for children ages 3 to 18. The membership fee each year is $80 per family plus a registration fee of $85 in the spring season and $65 in the fall season. Each team also receives sponsorships from local businesses in order to help purchase personalized uniforms.

8. **Provide basis for application:**
The purpose of this application is to ask for exemption of the Real estate taxes paid on Beale Park.

9. **Specific activities conducted on premises:**
SRA utilizes Beale park for practices and games.

10. **Specific activities on premises NOT a part of organization:**
Residents of Moonefield do use Beale Park as a place to take their children to play.

11. If a residence, indicate occupant's relationship to the organization:
N/A

12. Organization receiving rent or income from property: No

13. Date property will be occupied for Tax Exempt purposes: owned since 1968

14. In addition, please attach supporting documentation related to the following:

1) A copy of the determination from the IRS regarding tax-exempt status pursuant to §501(c) of the Internal Revenue Code of 1954.

2) A statement signed by an officer indicating whether a current annual alcoholic beverage license for serving alcoholic beverages has been issued by the Virginia Alcoholic Beverage Control Board to the organization for use on its property. A copy of the organization's current alcoholic beverage license issued by the Virginia Alcoholic Beverage Control Board.

   If no license is held, check here ☑

3) A copy of the organization's most current compensation schedule in order to determine if any director, officer, or employee is paid compensation in excess of a reasonable allowance.

4) A copy of the Internal Revenue Service form 990, 990EZ, or 990PF together with any schedules and attachments most recently filed with the IRS for the previous calendar year or an explanation why such form was not filed.

5) A statement from the organization clearly indicating whether the property is to be used for religious, charitable, patriotic, historical, benevolent, cultural, or public park and playground purposes as set forth in Article X, Section 6 (a)(6) of the Constitution of Virginia.

6) A list of names and addresses of the current officers and directors of the organization.

7) A copy of all fictitious names certificated, if any, filed by the organization with either the State Corporation Commission or the Isle of Wight County Circuit Court.

8) Copies of current financial statements, including a list of the individuals or entities to whom the net earnings of the organization inure. The list must indicate the amount or percentage of the net earning inuring to each individual or entity.

9) A statement signed by an officer of the organization indicating whether any significant portion of the service provided by the organization is generated by funds received from donations, contributions, or local, state, or federal grants. This statement must include an indication of the percentage of service generated by such funds. Donations shall include the providing of personal services or the contribution of in-kind or other material services.

10) A copy of the current articles of incorporation and bylaws of the organization.

11) A statement signed by an officer indicating whether the organization has any rule, regulation, policy, or practice that unlawfully discriminates on the basis of religious conviction, race, color, sex, or national origin.

12) A description of how the organization provides services for the common good of the public, specifically identifying the amount or level of service provided to Isle of Wight County Citizens and the length of time these services have been provided in Isle of Wight County. To be considered, the organization should provide, on average, 50% of its services and community benefit to Isle of Wight citizens and the length of time these services have been provided within Isle of Wight County should be three (3) years or greater.

13) Any other information the organization believes is supportive of its request for tax exemption.

AFFIDAVIT: The undersigned ☐ property owner, or ☑ duly authorized agent/representative thereof [check one], certifies that this application and the foregoing answers, statements, and other information herewith submitted are in all respects true and correct to the best of their knowledge and belief. WITH THE UNDERSTANDING THAT ANY INCORRECT INFORMATION SUBMITTED MAY RESULT IN THE DELAY OR RESCHEDULING OF APPROVAL BY THE BOARD OF SUPERVISORS.

Signed: Meagan Doggett

Printed Name: Meagan Doggett

Tile Member

(Officer, Member, etc. with authority to bind the Organization)

Date: 3/5/21

ADMINISTRATIVE INFORMATION

PARCEL NUMBER
22-04-000B

Parent Parcel Number

Property Address
MOONEFIELD DR

Neighborhood
100 IOW COMMERCIAL

Property Class
4 COMMERCIAL/INDUSTRIAL

TAXING DISTRICT INFORMATION

Jurisdiction	093
Area	001
District	55

OWNERSHIP

Tax ID 4643

SMITHFIELD RECREATION ASSOC INC
P O BOX 23
SMITHFIELD, VA 23431

PAR B C M BEALE PROP
PLAT ATTACHED TO DB 182 PAGE 469

Printed 03/08/2021 Card No. 1 of 1

TRANSFER OF OWNERSHIP

Date		
05/09/1968	BEALE CARL M & LUCILLE B	Bk/Pg: 192, 513 $1000

COMMERCIAL

VALUATION RECORD

Assessment Year		07/01/2008	07/01/2010	07/01/2010	07/01/2011	07/01/2012	07/01/2015	01/01/2019
Reason for Change		Discovery	2010 Reas	Land Book	Land Book	2012 Reas	15 Reasment	2019 Reas
VALUATION	L	190500	190500	190500	190500	190500	190500	190500
0	B	59800	67900	67900	67900	87700	90100	90100
	T	250300	258400	258400	258400	278200	280600	280600

Site Description

Topography:
Rolling

Public Utilities:
All

Street or Road:
Paved

Neighborhood:
Static

Zoning:

Legal Acres:
3.8100

LAND DATA AND CALCULATIONS

	Land Type	Rating Soil ID -or- Actual Frontage	Measured Acreage -or- Effective Frontage	Table Effective Depth	Prod. Factor -or- Depth Factor -or- Square Feet	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Value
1	Primary Commercial/Indust Land		3.8100		1.00	50000.00	50000.00	190500		190500

LGL: PAR B C M BEALE PROP
PLAT ATTACHED TO DB 182 PAGE 469

Supplemental Cards

TRUE TAX VALUE 190500

Supplemental Cards
TOTAL LAND VALUE 190500

IMPROVEMENT DATA

PHYSICAL CHARACTERISTICS

01 02 03 04 06 07

(LCM: 100.00)

SPECIAL FEATURES

Description	Value

SUMMARY OF IMPROVEMENTS

ID	Use	Stry Hgt	Const Type	Grade	Year Const	Eff Year	Cond	Base Rate	Feat-ures	Adj Rate	Size or Area	Computed Value	Phys Depr	Obsol Depr	Market Adj	% Comp	Value
01	RESTRMS	0.00	4	C	2010	2010	AV	0.00	N	50.00	11x 60	33000	25	SV	100	100	24800
02	FENCE/CL	0.00	5	C	2010	2010	AV	0.00	N	10.00	2500	25000	20	SV	100	100	20000
03	LIGHTS	0.00	5	C	2010	2010	AV	0.00	N	0.00	0	0	0	SV	100	100	17000
04	2S BLDG	0.00	1	C	2010	2010	AV	0.00	N	60.00	24x 24	34560	25	SV	100	100	25900
06	SHED	0.00	1	C	2014	2014	AV	0.00	N	8.00	8x 18	1150	0	SV	100	100	1200
07	SHED	0.00	1	C	2014	2014	AV	0.00	N	8.00	8x 18	1150	0	SV	100	100	1200

Data Collector/Date
EC 01/29/2019

Appraiser/Date
GE 02/14/2019

Neighborhood
Neigh 100 AV

Supplemental Cards
TOTAL IMPROVEMENT VALUE 90100

Tax ID 4617 Printed 03/08/2021 Card No. 1 of 1

ADMINISTRATIVE INFORMATION

PARCEL NUMBER
22-01-042C

Parent Parcel Number

Property Address
MOONEFIELD DR

Neighborhood
100 IOW COMMERCIAL

Property Class
4 COMMERCIAL/INDUSTRIAL

TAXING DISTRICT INFORMATION

Jurisdiction	093
Area	001
District	55

OWNERSHIP

SMITHFIELD RECREATION ASSOC INC
P O BOX 23
SMITHFIELD, VA 23431

PAR C C M BEALE PROP
PLAT ATTACHED TO DB 194 PG 122

TRANSFER OF OWNERSHIP

Date			Bk/Pg: 194, 122
09/13/1968	BEALE CARL M & LUCILLE B	$2500	

COMMERCIAL

VALUATION RECORD

Assessment Year		07/01/2008	07/01/2010	07/01/2010	07/01/2011	07/01/2012	07/01/2015	01/01/2019
Reason for Change		Discovery	2010 Reas	Land Book	Land Book	2012 Reas	15 Reasment	2019 Reas
VALUATION	L	125500	125500	125500	125500	125500	125500	125500
0	B	0	0	0	0	0	0	0
	T	125500	125500	125500	125500	125500	125500	125500

Site Description

Topography:
Level

Public Utilities:
Water

Street or Road:
Paved

Neighborhood:
Static

Zoning:

Legal Acres:
2.5100

LAND DATA AND CALCULATIONS

Land Type	Rating Soil ID -or- Actual Frontage	Measured Acreage -or- Effective Frontage	Table Effective Depth	Prod. Factor -or- Depth Factor -or- Square Feet	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Value
1 Primary Commercial/Indust Land		2.5100		1.00	50000.00	50000.00	125500		125500

LGL: PAR C C M BEALE PROP
PLAT ATTACHED TO DB 194 PG 122

Supplemental Cards

TRUE TAX VALUE 125500

Supplemental Cards
TOTAL LAND VALUE 125500

1) TAX EXEMPT STATUS FROM THE IRS

SMITHFIELD RECREATION ASSOCIATION, INC.

Supporting documentation for Item#14 for application of Non-Exempt Status

1) IRS determination letter attached.

2) Smithfield Recreation does not hold an ABC Beverage permit.

3) Smithfield Recreation does not pay Board members or have any employees

4) Form 990 attached.

5) All property own by Smithfield Recreation is for charitable purposes.

6) Current list of Officers attached

7) See attached

8) Financial statements attached for 2020.

9) Smithfield Recreation does not solicit for donations or grants from local, state or federal sources. Funds are generated via membership fees, player fees and sponsorships.

10) Current By-Laws attached.

11) Smithfield Recreation does not have any rule, regulation, policy, or practice that unlawfully discriminates on the basis of religious conviction, race, color, sex, or national origin.

12) The goal of Smithfield Recreation is to provide the youth of Smithfield with an enjoyable baseball/softball experience, which includes learning the basic skills of baseball/softball, teaching and instructing youth in the rules of baseball/softball, promoting teamwork, and developing skills necessary to play baseball/softball at a higher level. The organization aims to instill the values of sportsmanship and competition in the youth of Smithfield.

Chuck Allison
Smithfield Recreation Association
President

Form **990**
(Rev. January 2020)
Department of the Treasury
Internal Revenue Service

Return of Organization Exempt From Income Tax

Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)

▶ Do not enter social security numbers on this form as it may be made public.
▶ Go to *www.irs.gov/Form990* for instructions and the latest information.

OMB No. 1545-0047
2019
Open to Public Inspection

A For the 2019 calendar year, or tax year beginning , 2019, and ending , 20

B Check if applicable:
☐ Address change
☐ Name change
☐ Initial return
☐ Final return/terminated
☐ Amended return
☐ Application pending

C Name of organization Smithfield Recreation Association Inc
Doing business as
Number and street (or P.O. box if mail is not delivered to street address) Room/suite
P O Box 23
City or town, state or province, country, and ZIP or foreign postal code
Smithfield, VA 23431

D Employer identification number [redacted]
E Telephone number (757)365-0200
G Gross receipts $ [redacted]

F Name and address of principal officer: Bridger Field, P O Box 23, Smithfield, VA 23431

H(a) Is this a group return for subordinates? ☐ Yes ☒ No
H(b) Are all subordinates included? ☐ Yes ☐ No
If "No," attach a list. (see instructions)
H(c) Group exemption number ▶

I Tax-exempt status: ☒ 501(c)(3) ☐ 501(c) ( ) ◀ (insert no.) ☐ 4947(a)(1) or ☐ 527

J Website: ▶ N/A

K Form of organization: ☒ Corporation ☐ Trust ☐ Association ☐ Other ▶

L Year of formation: 1968

M State of legal domicile: VA

Part I Summary

Activities & Governance	1	Briefly describe the organization's mission or most significant activities: To provide athletic activities for youth	
	2	Check this box ▶ ☐ if the organization discontinued its operations or disposed of more than 25% of its net assets.	
	3	Number of voting members of the governing body (Part VI, line 1a)	3 — 11
	4	Number of independent voting members of the governing body (Part VI, line 1b)	4 — 11
	5	Total number of individuals employed in calendar year 2019 (Part V, line 2a)	5 — 0
	6	Total number of volunteers (estimate if necessary)	6 — 40
	7a	Total unrelated business revenue from Part VIII, column (C), line 12	7a — 0.
	b	Net unrelated business taxable income from Form 990-T, line 39	7b — 0.

			Prior Year	Current Year
Revenue	8	Contributions and grants (Part VIII, line 1h)	[redacted]	[redacted]
	9	Program service revenue (Part VIII, line 2g)		
	10	Investment income (Part VIII, column (A), lines 3, 4, and 7d)		
	11	Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)		
	12	Total revenue—add lines 8 through 11 (must equal Part VIII, column (A), line 12)		
Expenses	13	Grants and similar amounts paid (Part IX, column (A), lines 1–3)		
	14	Benefits paid to or for members (Part IX, column (A), line 4)		
	15	Salaries, other compensation, employee benefits (Part IX, column (A), lines 5–10)		
	16a	Professional fundraising fees (Part IX, column (A), line 11e)		
	b	Total fundraising expenses (Part IX, column (D), line 25) ▶ 0.		
	17	Other expenses (Part IX, column (A), lines 11a–11d, 11f–24e)	[redacted]	[redacted]
	18	Total expenses. Add lines 13–17 (must equal Part IX, column (A), line 25)		
	19	Revenue less expenses. Subtract line 18 from line 12		

			Beginning	End
Net Assets or Fund Balances	20	Total assets (Part X, line 16)	[redacted]	[redacted]
	21	Total liabilities (Part X, line 26)		
	22	Net assets or fund balances. Subtract line 21 from line 20		

Part II Signature Block

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than officer) is based on all information of which preparer has any knowledge.

Sign Here

Signature of officer — Date: 05/04/2020

Bridger Field, Treasurer
Type or print name and title

Paid Preparer Use Only

Print/Type preparer's name	Preparer's signature	Date	Check ☒ if self-employed	PTIN
T. Craig Stallings		02/22/2021		[redacted]

Firm's name ▶ STALLINGS & ASSOCIATES, PC — Firm's EIN ▶ [redacted]
Firm's address ▶ 210 MAIN ST, SMITHFIELD, VA 23430 — Phone no. (757)365-0200

May the IRS discuss this return with the preparer shown above? (see instructions) ☒ Yes ☐ No

For Paperwork Reduction Act Notice, see the separate instructions. BAA REV 10/27/20 PRO Form **990** (2019)

2) ABC LICENSE

- STATEMENT SIGNED BY AN OFFICER

SMITHFIELD RECREATION ASSOCIATION, INC.

Supporting documentation for Item#14 for application of Non-Exempt Status

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3) Smithfield Recreation does not pay Board members or have any employees

4) Form 990 attached.

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6) Current list of Officers attached

7) See attached

8) Financial statements attached for 2020.

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11) Smithfield Recreation does not have any rule, regulation, policy, or practice that unlawfully discriminates on the basis of religious conviction, race, color, sex, or national origin.

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Chuck Allison
Smithfield Recreation Association
President

3) COMPENSATION SCHEDULE

SMITHFIELD RECREATION ASSOCIATION, INC.

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Chuck Allison
Smithfield Recreation Association
President

4) IRS SERVICE FORMS

- FORM 990

SMITHFIELD RECREATION ASSOCIATION, INC.

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Chuck Allison
Smithfield Recreation Association
President

COUNTY OF ISLE OF WIGHT

OFFICE OF THE COMMISSIONER OF THE REVENUE

Post Office Box 107
Isle of Wight, Virginia 23397
(757) 365-6222

Gerald H. Gwaltney
Commissioner of the Revenue

March 26, 2021

IRS Tax Return 990 is on file in the Commissioner's office. Confidential tax return protected from public disclosure by *Code of Virginia* § 58.1-3.

5) STATEMENT OF USE

SMITHFIELD RECREATION ASSOCIATION, INC.

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Chuck Allison
Smithfield Recreation Association
President

6) LIST OF CURRENT OFFICERS

2021 SRA BOARD OF DIRECTORS

Charles Allison
224 Wellington Circle
Smithfield, VA 23430

Casey Thrift
122 Lumar Rd.
Smithfield, VA 23430

Dana Edwards
11183 Burwells Bay Rd.
Smithfield, VA 23430

Melanie Gray
805 Canteberry Lane
Smithfield, VA 23430

Corey Hearn
10189 Emmanuel Church Rd.
Smithfield, VA 23430

Pat Harkins
208 Wellington Circle
Smithfield, VA 23430

Steve Hedgepeth
32 Dashiell Dr.
Smithfield, VA 23430

Bo Hamrick
200 Cove Terrance
Carrollton, VA 23314

John Sundburg
16157 Quail Crescent Lane
Carrollton, VA 23314

Meagan Doggett
13479 Poor House Rd.
Windsor, VA 23487

Suzanne Whitehurst
23090 Andrew Ct.
Windsor, VA 23487

7) ALL FICTITIOUS NAMES FILED

Name History

Entity Information

Entity Name:	SMITHFIELD RECREATION ASSOCIATION, INC.	Entity ID:	01161926
Entity Type:	Nonstock Corporation	Entity Status:	**Active**
Formation Date:	04/30/1968	Reason for Status:	Active and In Good Standing
VA Qualification Date:	04/30/1968	Status Date:	05/22/2020
Industry Code:	0 - General	Period of Duration:	Perpetual
Jurisdiction:	VA		
Annual Report Due Date:	04/30/2021		
Registration Fee Due Date:	04/30/2021	Charter Fee:	$0.00

Name History Details

Effective Start Date	Effective End Date	Name	Name Type
03/02/1977	N/A	SMITHFIELD RECREATION ASSOCIATION, INC.	Legal Name

Page 1 of 1, records 1 to 1 of 1

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8) CURRENT FINANCIAL STATEMENTS

	Jan - Dec 20	Jan - Dec 19	$ Change	% Change
Ordinary Income/Expense				
Income				
Coastal Storm Income	15,481.58	38,399.79	-22,918.21	-59.68%
SBP Income	39,332.00	37,491.50	1,840.50	4.91%
Opening/Closing Ceremonies	0.00	651.35	-651.35	-100.0%
Uniforms Recovery Cost	0.00	1,208.00	-1,208.00	-100.0%
Business Sponsorship	6,150.00	13,706.65	-7,556.65	-55.13%
Membership / Registration Fees	39,441.96	54,166.43	-14,724.47	-27.18%
Sunday Select Teams-2015	200.00	0.00	200.00	100.0%
Donations	4,751.50	386.65	4,364.85	1,128.89%
Fall Ball	0.00	9,648.00	-9,648.00	-100.0%
Uncategorized Income				
Field rental	1,000.00	0.00	1,000.00	100.0%
Costal storm fee to SRA	1,680.00	1,200.00	480.00	40.0%
All Stars TB Tournaments	0.00	100.00	-100.00	-100.0%
Uncategorized Income - Other	0.00	17.03	-17.03	-100.0%
Total Uncategorized Income	2,680.00	1,317.03	1,362.97	103.49%
Concessions	7,658.72	27,862.67	-20,203.95	-72.51%
Total Income	115,695.76	184,838.07	-69,142.31	-37.41%
Gross Profit	115,695.76	184,838.07	-69,142.31	-37.41%
Expense				
COVID expenses	400.00	0.00	400.00	100.0%
Coastal Storm Expenses	11,233.50	35,125.19	-23,891.69	-68.02%
SBP expenses	35,334.00	6,685.59	28,648.41	428.51%
Babe Ruth Baseball Registration	0.00	55.40	-55.40	-100.0%
Coastal Storm-Team Expenses	2,155.00	1,884.00	271.00	14.38%
Blue Sumbero	331.67	0.00	331.67	100.0%
Closing Ceremonies	0.00	3,527.38	-3,527.38	-100.0%
Advertisement	122.50	2,579.97	-2,457.47	-95.25%
Consession Expense	8,861.41	18,653.60	-9,792.19	-52.5%
Building and Grounds	4,009.52	5,112.69	-1,103.17	-21.58%
Uncategorized Expenses				
Sunday select fees	4,700.00	3,440.00	1,260.00	36.63%
SB Summer Showdown - Tournament	0.00	350.00	-350.00	-100.0%
Town of Smithfield Registration	100.00	30.00	70.00	233.33%
Donation to SPB	7,375.00	5,000.00	2,375.00	47.5%
Western Tidewater Registration	0.00	369.50	-369.50	-100.0%
All Stars BB Tournaments	0.00	622.20	-622.20	-100.0%
Trophies	0.00	523.80	-523.80	-100.0%
Total Uncategorized Expenses	12,175.00	10,335.50	1,839.50	17.8%
Capital Expense				
Golf cart	0.00	3,700.00	-3,700.00	-100.0%
ipad purchases for CC payments	0.00	699.58	-699.58	-100.0%
Lease Agreement-New Ball Field	25,000.00	25,000.00	0.00	0.0%
Real Estate Tax	2,119.44	4,794.71	-2,675.27	-55.8%

State Corp Comm	35.00	25.00	10.00	40.0%
Real EstateTax	771.59	0.00	771.59	100.0%
Total Capital Expense	27,926.03	34,219.29	-6,293.26	-18.39%
Field Maintenance	0.00	86.42	-86.42	-100.0%
Insurance	4,428.00	217.00	4,211.00	1,940.55%
Office Supplies	139.50	137.00	2.50	1.83%
Sports Equipment	4,049.83	3,417.98	631.85	18.49%
Umpires	4,075.00	14,570.00	-10,495.00	-72.03%
Uniforms	10,996.70	15,978.00	-4,981.30	-31.18%
Utilities	4,287.49	2,907.06	1,380.43	47.49%
Total Expense	130,525.15	155,492.07	-24,966.92	-16.06%
Net Ordinary Income	-14,829.39	29,346.00	-44,175.39	-150.53%
Net Income	**-14,829.39**	**29,346.00**	**-44,175.39**	**-150.53%**

9) STATEMENT OF FUNDS RECEIVED AND PERCENTAGE

SMITHFIELD RECREATION ASSOCIATION, INC.

Supporting documentation for Item#14 for application of Non-Exempt Status

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2) Smithfield Recreation does not hold an ABC Beverage permit.

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Chuck Allison
Smithfield Recreation Association
President

10) CURRENT ARTICLES OF INCORPORATION AND BYLAWS

Incorporation date - 4/30/68
Charter Book 4-135-? (In Circuit Ct. Office)

ARTICLES OF INCORPORATION

OF

COMMUNITY RECREATION ASSOCIATION

We hereby associate to form a non-stock corporation under the provisions of Chapter 2, of Title 13.1 of the Code of Virginia, 1950, as amended, and to that end set forth the following:

I. The name of the corporation is COMMUNITY RECREATION ASSOCIATION.

II. This Association is formed for the purpose of promoting, encouraging and stimulating interest in wholesome, supervised recreation, and shall have full power and authority to own property and equipment, to engage in and promote recreational activities, and shall have the power to raise money by popular subscription, or in any other legal manner, and to use and expend any and all such property or money, either or both, in and about the accomplishment of its purposes, as herein set out. It shall have the power to contract and be contracted with, to lease, and to lease to others real and personal property; to employ such person or persons as may be deemed proper and necessary for effecting the purposes of the Association, and shall have generally all other powers necessary or convenient in and about the attainment of the purposes for which it is organized; and all money raised, by popular subscription or otherwise, and all property of the Association shall be devoted exclusively to promoting, encouraging and stimulating wholesome supervised recreation.

III. The corporation shall be a non-stock, non-profit recreation association. The private property of the incorporators shall not be liable for the debts of the corporation. No part of the net earnings of the corporation shall inure to the benefit of any officer or director of the corporation or to any private individual (except that a reasonable compensation may be paid for services rendered to or for the corporation affecting one or more of its purposes) and no

officer or director of the corporation or any private individual shall be entitled to share in the distribution of any of the corporate assets upon dissolution of the corporation. Upon dissolution of the corporation or winding up of its affairs, the assets of the corporation shall be distributed exclusively to charitable, scientific or educational organizations whichwould then qualify under provisions of Section 501(c)(3) of the Internal Revenue Code and its regulations as they now exist or as they may hereafter be amended.

IV. There shall be only one class of membership, namely, regular membership. Such regular members shall purchase such membership and pay fees and annual dues as established by the by-laws or by the Board of Directors, respectively.

V. The number of directors constituting the initial Board of Directors is fifteen (15). The number of directors, not less than three, shall be fixed by the bylaws, and in the absence of a bylaw fixing the number, the number shall be seven. The term of each director shall be one year, but each said director may be re-elected to an indefinite number of one year terms.

All directors shall be elected by the Board of Directors and any vacancy occurring in the Board of Directors, either caused by expiration of term or by increase in the number of directors or otherwise, shall be filled by the remaining directors who shall have the exclusive power to fill such vacancies.

The names and addresses of the persons who are to serve as the initial directors are:

1. George E. Webb, Jr., Smithfield, Virginia.
2. Charles E. Jones, Smithfield, Virginia.
3. Charles R. Modlin, Smithfield, Virginia.
4. Dawn H. Wright, Smithfield, Virginia.
5. Lloyd D. Joyner, Smithfield, Virginia.
6. Vivian Jones, Smithfield, Virginia.
7. Jeanette T. Johnston, Smithfield, Virginia.
8. Shirley Rogers, Smithfield, Virginia.
9. Jimmie Whitley, Smithfield, Virginia.
10. Ralph S. Goodrich, Smithfield, Virginia.
11. Franklin E. Hall, Smithfield, Virginia.
12. Thomas L. Ross, Smithfield, Virginia.
13. J. Wilson Ames, Jr., Smithfield, Virginia.
14. O. A. Spady, Smithfield, Virginia.
15. Jeanette Minton Sene, Smithfield, Virginia.

VI. The Post Office address of the initial registered office shall be 235 Main Street, Smithfield, in Isle of Wight County, Virginia, and the initial registered agent shall be William K. Barlow, a member of the Virginia State Bar and a resident of the State of Virginia, whose business office is the same as that of the registered office of the Association.

Given under our hands this the 26th day of April, 1968.

George E. Webb, Jr.

C. E. Jones

Charles R. Modlin

STATE OF VIRGINIA

COUNTY OF ISLE OF WIGHT, to-wit:

I, Vivian L Davidson, a Notary Public in and for the County of Isle of Wight, State of Virginia, do hereby certify that George E. Webb, Jr., Charles E. Jones, Charles R. Modlin, and Dawn H. Wright, whose names are signed to the writing hereto annexed, bearing date the 26th day of April, 1968, have acknowledged the same before me in my County aforesaid.

Given under my hand this the 26 day of April, 1968.

Vivian L. Davidson
Notary Public

My commission expires: April 23 1969.

Note - According to the receipt for $10 received from the SCC, the "Certificate of Amendment & Restatement" was issued and admitted to record in the Office of the SCC (4/27/69) WHG

ARTICLES OF AMENDMENT

RESTATING THE ARTICLES OF INCORPORATION

OF

COMMUNITY RECREATION ASSOCIATION

File Copy

1. On July 9, 1968, the Board of Directors of the Corporation, by a vote of at least two-thirds of the Directors in office, adopted an amendment restating the Articles of Incorporation so that they shall read in their entirety as follows:

I. The name of the corporation is COMMUNITY RECREATION ASSOCIATION, INC.

II. This Association is formed for the purpose of promoting, encouraging and stimulating interest in wholesome, supervised recreation, and shall have full power and authority to own property and equipment, to engage in and promote recreational activities, and shall have the power to raise money by popular subscription, or in any other legal manner, and to use and expend any and all such property or money, either or both, in and about the accomplishment of its purposes, as herein set out. It shall have the power to contract and be contracted with, to lease, and to lease to others real and personal property; to employ such person or persons as may be deemed proper and necessary for effecting the purposes of the Association, and shall have generally all other powers necessary or convenient in and about the attainment of the purposes for which it is organized; and all money raised, by popular subscription or otherwise, and all property of the Association shall be devoted exclusively to promoting, encouraging and stimulating wholesome supervised recreation.

III. The corporation shall be a non-stock, non-profit recreation association. The private property of the incorporators shall not be liable for the debts of the corporation. No part of the net earnings of the corporation shall inure to the benefit of any officer or director of the corporation or to any private individual (except that a reasonable compensation may be paid for services rendered to or for the corporation affecting one or more of its purposes) and no officer or director of the corporation or any private individual shall be entitled to share in the distribution of any of the corporate assets upon dissolution of the corporation. Upon dissolution of the corporation or winding up of its affairs, the assets of the corporation shall

be distributed exclusively to charitable, scientific or educational organizations which would then qualify under provisions of Section 501(c)(3) of the Internal Revenue Code and its regulations as they now exist or as they may hereafter be amended.

IV. Membership

A. There shall be only one class of membership, namely, regular membership. Such regular members shall purchase such membership and pay annual dues as established by the by-laws.

B. All members of the Association in good standing shall have the right to vote in person at any meeting, regular or special, of the Association.

V. Directors

A. The number of directors, not less than three, shall be fixed by the by-laws, and in the absence of a by-law fixing the number, the number shall be seven (7). The term of each director shall be one year, but each said director may be re-elected to an indefinite number of one year terms.

B. All officers and directors shall be elected by the members in good standing, but any vacancy occurring in the Officers or Board of Directors, before the expiration of their term, shall be filled by the remaining directors who shall have the exclusive power to fill such vacancies for the unexpired terms.

2. There are no members of the Corporation with the right to vote on amendments.

Executed in the name of the corporation by its president or a vice- president and its secretary or assistant secretary who declare under the penalties of perjury that the facts stated therein are true.

Dated September, 19, 1968.

COMMUNITY RECREATION ASSOCIATION

By George E. Wellp.
President

And Charles R. Modlin
Secretary

mailed
SCC
3/8/76

580

ARTICLES OF AMENDMENT TO
THE ARTICLES OF INCORPORATION OF
COMMUNITY RECREATION ASSOCIATION, INC.

1. On September 16, 1975, in a meeting, the board of directors of the corporation found that the following proposed Amendment of its Articles of Incorporation was in the best interests of the corporation and directed that it be submitted to a vote of the members having the right to vote on amendments:

Be it resolved by the board of directors of Community Recreation Association, Inc., that the name of the corporation be changed to Smithfield Recreation Association, Inc., by amending the Articles of Incorporation.

2. On October 20, 1975, being not less than twenty-five (25) days nor more than fifty (50) days before the meeting of the members to act upon the proposed amendment, written notice of the meeting was given personally or by mail to each member entitled to vote on the proposed amendment. The notice stated the place, day and hour of the meeting and the purpose or purposes for which it was called, and was accompanied by a copy of the proposed amendment.

3. On October 28, 1975, a quorum being present, a meeting of the members was held and the propsed amendment was adopted by unanimous vote of the members present, being more than two-thirds (2/3) of the votes entitled to be cast by members present or represented by proxy at the meeting.

COMMUNITY RECREATION ASSOCIATION, INC.

By H. Woodrow Crook, Jr.
President

H. WOODROW CROOK, JR.
Attorney-at-Law
SMITHFIELD, VIRGINIA

Attest:

Jane Phillips
Secretary

STATE OF VIRGINIA

County of Isle of Wight, to-wit:

I, Pamela J. Camper, a Notary Public in and for the State and County aforesaid, do certify that H. Woodrow Crook, Jr., President, and Jane Phillips, Secretary, whose names are signed to the writing above, bearing date on the 2nd day of February, 1976, have acknowledged the same before me in my County aforesaid.

Given under my hand this 2nd day of February, 1976.

My commission expires March 11, 1978.

Pamela J. Camper
Notary Public

I was commissioned Notary Public as Pamela L. Joyner.

H. WOODROW CROOK, JR.
Attorney-at-Law
SMITHFIELD, VIRGINIA

SCC 9

DEED BOOK 4 PAGE 562

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

AT RICHMOND,
February 6, 1976

The accompanying articles having been delivered to the State Corporation Commission on behalf of

Community Recreation Association, Inc. (changing name to Smithfield Recreation Association, Inc.)

and the Commission having found that the articles comply with the requirements of law and that all required fees have been paid, it is

ORDERED that this CERTIFICATE OF AMENDMENT

be issued, and that this order, together with the articles, be admitted to record in the office of the Commission; and that the corporation have the authority conferred on it by law in accordance with the articles, subject to the conditions and restrictions imposed by law.

Upon the completion of such recordation, this order and the articles shall be forwarded for recordation in the office of the clerk of the Circuit Court Isle of Wight County

STATE CORPORATION COMMISSION
By Thomas P. Harwood Jr.
Commissioner

VIRGINIA:

In the Clerk's Office of the Circuit Court Isle of Wight County

The foregoing certificate (including the accompanying artfcles) has been duly recorded in my office this 25th day of February, 1976 and is now returned to the State Corporation Commission by certified mail.

W. E. Laine, Jr.
Clerk

By: Kathryn R Wills
Deputy

I certify that the document to which this authentication is affixed is a true copy of record in the Isle of Wight Circuit Court. That I have custody of the record and that I am custodian of that record.

Sharon D. Jones, Clerk
Isle of Wight Circuit Court DC

To
W. K. Barlow
2/24/76
W. E. Laine Jr. Clerk

SCC 19-3M-10-15-65

BOOK 4 PAGE 559

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

RICHMOND, February 9, 1976

To the Clerk of the Circuit Court of Isle of Wight County

I enclose check for $1.00, pursuant to the provisions of § 13.1-10 or § 13.1-209, to pay the cost of recording in your charter book that

Smithfield Recreation Association, Inc. formerly Community Recreation Association, Inc.

has its registered office at

229 Main Street, Smithfield, Va. 23430 (Isle of Wight Co.)

and that the name of its registered agent at that address is

William K. Barlow, Attorney

Please mail your receipt direct to

Respectfully,

William C. Young

William C. Young
Clerk

VIRGINIA: Clerk's Office of the Circuit Court of the County of Isle of Wight, February 11, 1976, at 9:00 o'clock A.M. this Notice was received and with the certificate annexed, admitted to record.
TESTE: W. E. Laine, Jr. CLERK. By: Kathryn R. Hills, D. C.

I certify that the document to which this authentication is affixed is a true copy of record in the Isle of Wight Circuit Court. That I have custody of the record and that I am custodian of that record.

Sharon N. Jones, Clerk
Deborah V. Jefferson DC
Isle of Wight Circuit Court

BY-LAWS
OF
SMITHFIELD RECREATION ASSOCIATION, INC.

(Revised – 1/21/2017) †

† Please contact the SRA President to ensure this is the most recent revision of the SRA bylaws.

I. NAME: The name of this non-stock corporation shall be "Smithfield Recreation Association, Inc.", and for designation purposes, it is referred to in these bylaws as the "Association".

II. PURPOSE: This Association is formed for the purpose of promoting, encouraging and stimulating interest in wholesome, supervised recreation through educational and participatory programs. It shall have full power and authority, by way of example and not by way of limitation, to:

a. own property and equipment;
b. engage in and promote recreational activities;
c. raise money by popular subscription, or in any other legal manner;
d. use and expend any and all such property or money, either or both, in and about the accomplishment of its purposes, as herein set out;
e. contract and be contracted with;
f. lease, and to lease to others real estate and personal property;
g. employ such person or persons as may be deemed proper and necessary for effecting the purposes of the Association;

and shall have generally all other powers necessary or convenient in and about the attainment of the purposes for which it is organized. Except as provided under Section XVIII, Termination of Association, all money raised, by popular subscription or otherwise, and all property of the Association shall be devoted exclusively to promoting, encouraging and stimulating wholesome, supervised recreation through educational and participatory programs. No income or asset of the Association shall inure to the benefit of any individual.

III. ADDRESS:

a. REGISTERED AGENT: The Post Office address of the registered office shall be 353 Main Street, Smithfield, in Isle of Wight County, Virginia 23430, and the initial registered agent shall be William K. Barlow, a member of the Virginia State Bar and a resident of the State of Virginia, whose business address is the same as that of the registered office of the Association.
b. REGULAR POST OFFICE ADDRESS: P. 0. Box 23, Smithfield, Virginia 23431.

IV. MEMBERSHIP:

a. Members in this Association shall consist of such persons who apply for membership, in such manner as designated by the Board of Directors of the Association (hereinafter the Board), who shall pay their membership dues and any other assessments authorized by the Board.
b. Members agree that they will abide by the bylaws and other rules of the

Association and that failure to abide by these bylaws or any other rule of the Association shall be grounds for membership termination without refund of any membership dues or assessments.

c. Without paying any initiation fee or additional annual dues, other than any fee that may be assessed for participation in a program sponsored by the Association, the member's family, shall enjoy all Association privileges. The member's family is defined to include a member's spouse and any unmarried child or other dependent of the member or his or her spouse, such child being i) under 18 years of age and living at home, ii) under 22 years of age and attending school with family support, or iii) under 22 years of age and serving in the Armed Forces. With respect to Association related activities and activities conducted on or with Association property, the member agrees to be responsible for his or her conduct, and for the conduct of any member of his or her family.

d. In situations where children or other dependents of a member do not live in the household of the member, the Board may allow for such children or other dependents to be treated as part of the family of the member.

V. DUES: The Board shall direct the Treasurer as to the time and manner for the collection of dues and fees. The Board may establish policies relating to the collection or refund of dues. Failure to pay dues at the time and in the manner so established shall result in membership termination.

VI. MEMBERSHIP MEETINGS:

a. ANNUAL: The annual meeting of the Association shall be held on the last day of onsite Spring Registration, or at such other time, not more than thirty (30) days before or thirty (30) days after the last onsite Spring Registration date, as shall be designated by the Board of Directors, after giving notice not less than ten (10) nor more than twenty-five (25) days before said meeting to each member. The purpose of the Annual Meeting shall be to inform the Membership of such matters as the Board may bring before the Membership and to obtain Membership input concerning the activities of the Association.

b. SPECIAL MEMBERSHIP MEETINGS CALLED BY THE BOARD: In addition to the annual meeting of the Association in September, membership meetings may be called by the Board at such time, in such place and for such purposes as the Board may determine. A notice giving time and place of the meeting and stating the nature of the business to be transacted shall be mailed to each member of the Association at least ten (10) days but not more than twenty-five (25) days prior to the meeting, and at such meeting no other business than that stated may be transacted.

c. SPECIAL MEMBERSHIP MEETINGS CALLED AT REQUEST OF MEMBERS: Upon the written request of fifteen percent (15%) or more of the membership i) delivered in person or by US mail to any member of the Board and ii) specifying the action being requested of the Board and/or any motion to be presented, the Board shall, within 30 days following the first regular Board meeting occurring 10 days after receipt of the special meeting request, call a special meeting of the membership. A notice giving time and place of such special meeting,

stating the nature of the business to be transacted, including both the items specified in the special meeting request and any other item determined by the Board to be appropriate, shall be mailed to each member of the Association at least ten (10) days but not more than twenty-five (25) days prior to the meeting, and at such meeting no other business than that stated may be transacted.

VII. LIMITED POWER TO AMEND BY-LAWS AND TO REMOVE BOARD MEMBERS RESERVED BY MEMBERS: Provided that there is a quorum, these by-laws may be amended, and any Board member may be replaced, by majority vote at any annual or special membership meeting. Regardless of agenda, a motion to amend these by-laws or to replace a board member shall be heard and acted upon at any membership meeting.

a. QUORUM: At any membership meeting, a quorum shall exist if and only if at least one-quarter (1/4) of the then current membership is present in person at such Association meeting.

VIII. NOTICE: Any notice required under these bylaws shall be accomplished in any manner that is reasonably expected to apprise the intended notice recipient of the contents of the notice. Not by way of limitation, the use of United States Mail and e-mail, both with no return receipt required, shall constitute sufficient notice. Mailing or e-mailing of notice shall be made to the last address provided in writing, or via e-mail, to the Association.

IX. BOARD OF DIRECTORS:

a. MEMBERSHIP OF BOARD: The governing body of this Association shall be known as the Board of Directors and shall consist of the following:
    i. President
    ii. Vice-President
    iii. Secretary
    iv. Treasurer
    v. Concession Committee Chairperson
    vi. Publicity/Sponsorship Committee Chairperson
    vii. Equipment Committee Chairperson
    viii. Building and Grounds Committee Chairperson
    ix. Information Technology (IT) Committee Chairperson
    x. Baseball Commissioner
    xi. Softball Commissioner
    xii. Such additional members as the Board may determine

b. The Board shall be elected in the manner hereinafter provided, for a term of one (1) year, although each may be elected to succeed himself or herself for up to three (3) additional terms, or may be elected to serve in any other Board position, and shall hold office until his or her successor is elected and qualified.

c. In the event that the Nominating Committee is unable to recommend a replacement Board member, the Nominating Committee may recommend to the Board that the current Board member be reelected for more than three (3) additional terms. However, such recommendation should only be made in

unusual circumstances and shall require a concurrence of at least three-quarters (¾) of the Board. In such a situation, the Board Member who is the subject of the recommendation, and the chair of the meeting shall be entitled to vote.

d. The Board Term shall be from October 1 through September 30.

X. POWERS OF THE BOARD:

a. GENERALLY: The Board shall constitute the governing body of this Association and shall have complete and full management and control of the business of the Association. It may employ such person or persons as may be necessary in and about the effecting of the purposes of the Association.

b. SPECIFICALLY: In addition to any and all powers conferred upon by the Board by law, and by the Articles of Incorporation of the Association, these bylaws, without in any manner or degree abrogating, limiting or modifying any of its powers, grant to the Board the following authority:

i. To elect Board members prior to the annual membership meeting, to serve for the next forthcoming Board Term.

ii. To set forth the terms and conditions upon which a person may be accepted to membership; to examine and judge the qualification of each applicant for membership, being hereby granted full and final authority to accept or reject any such membership application.

iii. To hear and determine charges made against any member, full and final authority hereby granted to reprimand, suspend and expel any member in accordance with the bylaws. A member may be privately disciplined for cause upon the affirmative vote of a majority of the entire Board (not just those Board members present), but public reprimand, suspension, or expulsion shall require affirmative vote of three-fourths (3/4ths) of the entire Board (not just those Board members present).

iv. To appoint any needed committees and to define and delegate the duties and powers of each committee.

v. To determine initiation fees and annual dues.

vi. To make, alter, or amend Association rules and regulations, and bylaws, as long as they are consistent with State law, the Articles of Incorporation, and the bylaws.

vii. To remove a director from the Board for cause. For example, and not by way of limitation, the absence of a director from three (3) consecutive meetings of the Board, unless excused by the Board, shall be considered sufficient cause for removal.

viii. To choose a successor, who shall hold office for the unexpired term, in the event of a vacancy among the directors.

ix. To employ, in its discretion, at such times as it may determine, one or more qualified persons, not necessarily members of the Association, to audit the books of the Association or any officer, employee, committeeman or agent thereof.

x. To budget for the maintenance and operation of the Association and all of its activities.

xi. To exercise the powers of Comptroller in making adjustments or

transfer of funds from one budget category or item to another, as the need shall arise upon the recommendation of the Treasurer and upon approval of the Board.

xii. To employ or contract with such individuals or entities as the Board, from time to time, may determine to be in the best interests of the Association.

XI. LIMITATION ON BOARD POWERS.

a. Notwithstanding any other provision of these by-laws to the contrary, express or implied, the Board is not empowered to modify Article VII relating to the power of the membership to modify these by-laws and to replace a Board member.

b. Notwithstanding any other provision of these by-laws to the contrary, express or implied, the Board is not empowered to modify the limitation on its powers contained in this Article XI.

XII. BOARD MEETINGS:

a. REGULAR: The Board of Directors shall meet once a month, and at such other times as the President of the Association or any three (3) members of the Board may designate.

b. NOTICE REQUIREMENT: Notice of a Board meeting that is scheduled at a Board meeting shall not be required. Notice for any other Board meeting shall be provided not less than five (5) nor more than twenty-five (25) days prior to the date of the meeting and shall specify the purpose for such meeting. At such special meeting, only the business specified in the notice shall be conducted.

c. CHAIR: The Chair shall act as parliamentarian and follow Roberts Rules of Parliamentary Procedure, and shall vote only in the event of a tie. The President of the Association shall generally be the Chair of the Board. However, in the event that the President is not present at the meeting, or determines that it is appropriate to relinquish the chair for part or all of a meeting, the Vice-President shall assume the chair. In the event that neither the President nor Vice-President is able to chair part or all of a meeting, the Board shall appoint a chair.

d. VOTING:

i. Except as hereinafter provided, a quorum shall be a majority of the Board.

ii. Assuming a quorum is present, except in cases of expulsion, removal and by-laws amendment, and except as otherwise specifically provided in these bylaws, valid Board action requires that more votes be cast in favor of the action than against the action.

iii. Assuming a quorum is present, in cases of expulsion, removal and by-laws amendment, valid Board action requires that 3/4^{ths} or more of the entire Board, (not just those Board members present) be cast in favor of the action. The chair, unless the subject of the removal proceeding, shall be entitled to vote.

iv. In the event of a tie, the chair may cast a vote in favor of the action, thereby causing the Board to take the action.

XIII. EXECUTIVE COMMITTEE: The Executive Committee shall be four (4) in number, the Board Secretary being the same as the Secretary of the Association; the Board Treasurer being the same as the Treasurer of the Association; the Baseball Commissioner being the same as the Baseball Commissioner of the Association; and the Softball Commissioner being the same as the Softball Commissioner of the Association. The Executive Committee shall serve as Nominating Committee for Board positions and shall perform such duties and exercise such powers as the Board, from time to time, may determine.

XIV. OFFICERS:

a. ELECTION: Officers of the Association shall be Directors and shall be elected by the Board prior to the annual membership meeting as hereinbefore provided. The officers of this Association shall be a president, vice-president, secretary, and treasurer, all of whom shall be elected for a term of one (1) year, in the manner hereinbefore provided and shall hold office until their successors are elected and qualified.

b. DUTIES:

i. PRESIDENT: Shall preside at all meetings of the Association; shall make reports to the Board and to the Association; shall perform all other duties which are incidental to the office of President, or which shall be required of the President by the Board of Directors. The President shall be an exofficio member of all committees for the purpose of coordination the functions of all committees with that of the general organization.

ii. VICE-PRESIDENT: In the absence or disability of the President, shall-perform all of the duties of the President, except as otherwise herein provided. The Vice-President shall also be responsible for scheduling umpires for all baseball and softball games.

iii. SECRETARY: Shall keep the minutes of the Board; shall keep an accurate roll of the membership of the Association; shall be the custodian of the Association's seal and affix it to all such written documents as require it; shall sign or counter-sign all such instruments as may require the Secretary's signature as a corporate officer of the Association; shall issue or cause to be issued all notices of all meetings and shall keep the minutes and records thereof; shall keep or cause to be kept a corporation record book in which shall be entered an accurate history of all resignations of members or officers and all membership forfeitures, suspensions and expulsions, together with accurate listing of all members' names, home address and telephone numbers. The Secretary shall have the power to delegate the maintenance of membership records to other members of the Board.

iv. TREASURER: Shall receive all monies of the Association and pay out the same upon authorization of the Board, shall be the custodian of all Association funds; shall collect fees and dues from members; shall by letter, or otherwise, regularly advise delinquents of their unpaid

indebtedness; shall deposit all funds in a depository designated by the Board; shall disburse the Association funds as authorized by the Board; shall keep, or cause to be kept, proper vouchers of all sums disbursed and complete and regular accounts in accordance with a system satisfactory to the Board; shall submit at each regular meeting of the Board complete information as to the financial condition of the Association; shall, at the Annual Meeting, submit a complete and comprehensive statement of the Association's financial affairs; shall make the books and records of the Association available to all Board members; and shall be properly audited, at such time and in such manner as the Board may determine. The Treasurer shall furnish a bond for the faithful performance of the Treasurer's duties and the proper accounting of all funds which may come into the Treasurer's hands as such officer, such bond to be in an amount determined by the Board, surety on such bond to be paid by the Association.

XV. COMMITTEES:

a. CONCESSIONS COMMITTEE: The Concessions Committee shall consist of a chairperson and such other Association members or non-members as the Concessions Chair may determine, who shall have charge of all refreshments and concessions of every kind, and facilities used in affording refreshments and/or concessions.

b. INFORMATION TECHNOLOGY (IT) COMMITTEE: The IT Committee shall consist of a chairperson and such other Association members as the IT Chair may determine, who shall be responsible for maintaining the technology infra-structure, such as the domain, e-mail, website, registration and data base.

c. EQUIPMENT COMMITTEE: The Equipment Committee shall consist of a chairperson and such other Association members or non-members as the Equipment Chair may determine, who shall i) maintain, purchase, and distribute all uniforms and equipment for all teams of the Association and ii) maintain adequate records and inventory.

d. BUILDING AND GROUNDS COMMITTEE: The Building and Grounds Committee shall consist of a chairperson and such other Association members or non-members as the Building and Grounds Chair may determine, who shall maintain all playing fields, buildings and surrounding areas.

e. PUBLICITY/SPONSORSHIP COMMITTEE: The Publicity/Sponsorship Committee shall consist of a chairperson and such other Association members or non-members as the Publicity/Sponsorship Chair may determine, who shall publicize all activities of this Association, through newspaper, signs, or any other publications deemed necessary by the Board of Directors.

f. BASEBALL COMMISSIONER: The Baseball Commissioner shall represent the Association at all Pony Baseball organized sports; in coordination with the Softball Commissioner, schedule baseball games and practices; shall recommend special rules to the Board for its approval; shall render decisions regarding rules during the season, such decisions not being subject to appeal.

g. SOFTBALL COMMISSIONER: The Softball Commissioner shall represent the Association at all Pony Softball organized sports; in coordination with the

Baseball Commissioner, schedule softball games and practices; shall recommend special rules to the Board for its approval; shall render decisions regarding rules during the season, such decisions not being subject to appeal.

h. MEETINGS: Each Committee of the Association shall meet at such time and place as shall be deemed necessary by the Board or the President of the Association, and at such other times as the Chairperson of the respective committee desires.

XVI. MISCELLANEOUS PROVISIONS:

a. FISCAL YEAR: Shall be the calendar year beginning January 1.

b. OFFICER AND DIRECTOR YEAR: All directors, officers and committee members will take office as of October 1 and shall serve through September 30.

c. COMPENSATION: No salary or other compensation shall be paid any director, officer or committee member of the Association for serving in such capacity except when specifically provided for by action of the Board.

d. RULES OF PARLIAMENTARY PROCEDURE: In the conduct of all meetings, Roberts Rules of Order shall govern except where inconsistent with these by-laws.

XVII. INTERPRETATION OF BY-LAWS: The Board shall make all interpretations of these by-laws.

XVIII. TERMINATION OF ASSOCIATION: In the event this Association is disbanded or otherwise ceases to exist, all Association assets shall be turned over to an Internal Revenue Code Section 501(c)(3) entity. Such entity shall be determined by the Board and shall, to the extent possible, have purposes that are similar to those of this Association.

As approved by the membership at its annual membership meeting on 9/11/02.

11) STATEMENT OF DISCRIMINATION

SMITHFIELD RECREATION ASSOCIATION, INC.

Supporting documentation for Item#14 for application of Non-Exempt Status

1) IRS determination letter attached.

2) Smithfield Recreation does not hold an ABC Beverage permit.

3) Smithfield Recreation does not pay Board members or have any employees

4) Form 990 attached.

5) All property own by Smithfield Recreation is for charitable purposes.

6) Current list of Officers attached

7) See attached

8) Financial statements attached for 2020.

9) Smithfield Recreation does not solicit for donations or grants from local, state or federal sources. Funds are generated via membership fees, player fees and sponsorships.

10) Current By-Laws attached.

11) Smithfield Recreation does not have any rule, regulation, policy, or practice that unlawfully discriminates on the basis of religious conviction, race, color, sex, or national origin.

12) The goal of Smithfield Recreation is to provide the youth of Smithfield with an enjoyable baseball/softball experience, which includes learning the basic skills of baseball/softball, teaching and instructing youth in the rules of baseball/softball, promoting teamwork, and developing skills necessary to play baseball/softball at a higher level. The organization aims to instill the values of sportsmanship and competition in the youth of Smithfield.

Chuck Allison
Smithfield Recreation Association
President

12) SERVICES PROVIDED TO IOW CITIZENS

SMITHFIELD RECREATION ASSOCIATION, INC.

Supporting documentation for Item#14 for application of Non-Exempt Status

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Chuck Allison
Smithfield Recreation Association
President

13) STATEMENT OF POLITICAL ACTIVITIES

SMITHFIELD RECREATION ASSOCIATION, INC.

No activities of SRA involves carrying on propaganda, or otherwise attempting to influence legislation and whether the organization participates in, or intervenes in, any political campaign on behalf of any candidate for public office.

Chuck Allison
Smithfield Recreation Association
President

14) REVENUE IMPACT

COUNTY OF ISLE OF WIGHT

OFFICE OF THE COMMISSIONER OF THE REVENUE
Post Office Box 107
Isle of Wight, Virginia 23397
(757) 365-6222

Gerald H. Gwaltney
Commissioner of the Revenue

MEMORANDUM

TO: Don Robertson, Assistant County Administrator

FROM: Gerald H. Gwaltney, Commissioner

DATE: March 31, 2021

RE: Smithfield Recreation Association, Inc.

Cc: Randy Keaton, County Administrator
Robert W. Jones, Jr., County Attorney
Meagan Doggett, Smithfield Recreation Association, Inc.

Attached is Smithfield Recreation Association's application for real estate tax exemption. I have concluded my review of the application and request that the application be forwarded to the Board of Supervisors for their consideration. The current annual fiscal impact to Isle of Wight County is listed below.

Category	**Assessment**	**Annual Tax**
Real Estate	$406,100	$3,451.85
TOTAL	$406,100	$3,451.85

Please let me know if you have any questions.

Attachment – Application and Transmittal for Application Fee

15) OTHER INFORMATION

COUNTY OF ISLE OF WIGHT

OFFICE OF THE COMMISSIONER OF THE REVENUE
Post Office Box 107
Isle of Wight, Virginia 23397
(757) 365-6222

Gerald H. Gwaltney
Commissioner of the Revenue

MEMORANDUM

TO: Don Robertson, Assistant County Administrator

FROM: Gerald H. Gwaltney, Commissioner

DATE: March 31, 2021

RE: Smithfield Recreation Association, Inc.

Cc: Randy Keaton, County Administrator
Robert W. Jones, Jr., County Attorney
Meagan Doggett, Smithfield Recreation Association, Inc.

Attached is Smithfield Recreation Association's application for real estate tax exemption. I have concluded my review of the application and request that the application be forwarded to the Board of Supervisors for their consideration. The current annual fiscal impact to Isle of Wight County is listed below.

Category	**Assessment**	**Annual Tax**
Real Estate	$406,100	$3,451.85
TOTAL	$406,100	$3,451.85

Please let me know if you have any questions.

Attachment – Application and Transmittal for Application Fee

ARTICLE VI
Applications for Tax Exempt Status Designation for Real and Personal Property
(Adopted September 17, 2015)

Section 6.0

Purpose

This policy sets forth the procedural process and guidelines for qualifying nonprofit organizations to request exemption from real and personal property taxation in Isle of Wight County. The policy is intended to promote the efficient and timely management of applications and documentation of responsible parties required to facilitate tax exemption requests to the Board of Supervisors.

Section §58.1-3651 of the *Code of Virginia,* 1950, as amended, governs the requirements for entities seeking to have tax-exempt status granted to real or personal property owned by that entity. This section grants the Board of Supervisors the authority to designate as tax exempt that real and personal property owned by organizations which use it exclusively for religious, charitable, patriotic, historical, benevolent, cultural, or public park and playground purposes. In order to receive the tax-exempt status designation, the entity must comply with the procedural requirements contained in Section §58.1-3651, including a public hearing, to receive citizen comment on the request.

If the Board of Supervisors adopts the ordinance for exempt status, the exemption is valid for the next July 1st tax year and all future years unless revoked in accordance with the provision of §58.1-3605.

Section 6.1

Submission Requirements

An application for tax exemption must be submitted to the Commissioner of the Revenue by the requesting organization along with a check made payable to Treasurer, Isle of Wight County, Virginia for the cost of the required public hearing announcements in order to be considered by the County for exemption from real and/or personal property taxes. The public hearing notices shall be advertised in accordance with County Policy. The cost of the public hearing announcements shall be specified in the Fee Schedule of the fiscal year operating budget.

All information required as part of the application must be provided in order for the tax exemption request to be considered by the Board of Supervisors. In accordance with Section §58.1-3651, before adopting an ordinance granting tax-exemption, the Board of Supervisors is required to consider the following questions:

1. Whether the organization is exempt from taxation pursuant to Section 501(c) of the Internal Revenue Code of 1954.

2. Whether a current annual alcoholic beverage license for serving alcoholic beverages has been issued by the Virginia Alcoholic Beverage Control Board to the applicant for use on the property.

3. Whether any director or officer of the organization is paid compensation in excess of a reasonable allowance for salaries or other compensation for personal services which such director or officer actually renders.

4. Whether any part of the net earnings of such organization inures to the benefit of any individual, and whether any significant portion of the service provided by such organization is generated by funds received from donations, contributions, or local, state or federal grants.

5. Whether the organization provides services for the common good of the public; specific consideration will be given to the level of services provided for the common good of the public to citizens of Isle of Wight County. The organization should have been providing services in Isle of Wight County for a minimum of three (3) years. At least a minimum of 50% of the organization services should be provided to citizens of Isle of Wight County.

6. Whether a substantial part of the activities of the organization involves carrying on propaganda, or otherwise attempting to influence legislation and whether the organization participates in, or intervenes in, any political campaign on behalf of any candidate for public office.

7. Whether the organization has rules, regulations, policies, or practices that discriminate on the basis of religious conviction, race, color, sex, or national origin.

8. The revenue impact to the locality and its taxpayers of exempting the property. The information is generally answered by the Commissioner of the Revenue's office. The County shall assess the County service requirements for the facility requested to be exempted and the financial impact of any exempted tax burden shift to the taxpaying citizens and businesses.

9. Any other criteria, facts and circumstances that the Board of Supervisors deems pertinent to the adoption of such ordinance.

Section 6.2

Application Review and Public Hearing Requirements

The Commissioner of the Revenue's office shall:

a) Accept applications as well as the cost of advertising the public hearings and transmit said funds for deposit to the Treasurer's Office.

b) Process the application within 45 business days of receipt to review the application for

completion and accuracy and request any additional information required to process the application.

c) Complete the following sections of the attached "Evaluation Summary Form":
   1) Application Routing Number
   2) Date Application Received by the Commissioner of the Revenue
   3) Organization Name
   4) Property Address
   5) Assessed Value
   6) Parcel Map#
   7) Tax I.D. #

d) Forward the application and all supporting documentation to the County Administrator's Office for agenda placement and consideration by the Board of Supervisors.

The County Administrator's Office shall:

a) Schedule a public hearing for action by the Board of Supervisors within 45 business days of receipt of the application for tax exemption and "Evaluation Summary Form" from the Commissioner of the Revenue.

b) Place the advertisement for public hearing in a newspaper of general circulation in accordance with State Code and Chapter 8, Article 5, of the County Policy Manual, and retain the newspaper certification of same for the permanent record. The notice of public hearing must contain the assessed value of the real or personal property of the organization along with the amount of taxes that were, or would be, assessed against such property. The public hearing cannot be held until at least 5 days after the publication of the notice of public hearing.

c) Prepare and submit an agenda item and related authorizing ordinance for placement on the Board of Supervisors agenda. The ordinance must include a statement regarding the specific use on which the exemption is based, as well as a statement that continuance of the exemption shall be contingent on the continued use of the property in accordance with the purpose for which the organization is designated through a triennial application process as more specifically set forth in Section 6.3 below.

d) Review and complete the "Evaluation Summary Form" including the Criteria Evaluated section for attachment to the agenda item.

e) Notify the applicant in writing of the public hearing date.

f) Notify in writing the applicant of any action or inaction by the Board of Supervisors to include a copy of any ordinance adopted after the public hearing.

g) Finalize the documentation of the "Evaluation Summary Form" and acquire appropriate processing signatures of any actions authorized by the Board of Supervisors.

h) Retain the permanent record of the application information and Board of Supervisors action taken for review by the public and/or auditors in compliance with record retention requirements to include scanning all file contents to an appropriately titled file for future reference.

Section 6.3

Triennial Application for Exemption; Removal by Local Governing Body

In accordance with §58.1-3605 of the Code of Virginia, organizations receiving exemption from real and/or personal property taxation by the Isle of Wight Board of Supervisors shall be required to file triennially an application as a requirement for retention of the exempt status of the property. Such application shall show the ownership and usage of such property and shall be filed within sixty days preceding the tax year for which such exemption, or the retention thereof, is sought. The requirement to file a triennial application to maintain exempt status shall be written into the ordinance designating an organization as exempt from real and/or personal property taxes.

The Board of Supervisors may submit to the General Assembly a list of those organizations whose property is designated as tax exempt under §58.1-3650.1 et seq. which the local governing body wants to remove from its exempt property list. Legislation including such a list must be introduced no later than the first calendar day of any session of the General Assembly unless requested by the Governor.

Procedure for Applying for Exempt Status of a Non-Profit Organization

A. Pursuant to subsection 6(a)(6) of Article X of the Constitution of Virginia, on and after January 1, 2003, any county, city, or town may, by designation or classification, exempt from real or personal property taxes, or both, by ordinance adopted by the local governing body, the real or personal property, or both, owned by a nonprofit organization that uses such property for religious, charitable, patriotic, historical, benevolent, cultural, or public park and playground purposes. The ordinance shall state the specific use on which the exemption is based, and continuance of the exemption shall be contingent on the continued use of the property in accordance with the purpose for which the organization is classified or designated. No exemption shall be provided to any organization that has any rule, regulation, policy, or practice that unlawfully discriminates on the basis of religious conviction, race, color, sex, or national origin.

B. Any ordinance exempting property by designation pursuant to subsection A above shall be adopted only after holding a public hearing with respect thereto, at which citizens shall have an opportunity to be heard. The Board of Supervisors shall publish a notice of the public hearing once in the Smithfield Times and The Tidewater News newspapers. The notice shall include the assessed value of the real and tangible personal property for which an exemption is requested as well as the property taxes assessed against such property. The public hearing shall not be held until at least five days after the notice is published in the newspaper. The local governing body shall collect the cost of publication from the organization requesting the property tax exemption.

Before adopting any such ordinance, the Board of Supervisors shall consider the following questions:

1. Whether the organization is exempt from taxation pursuant to §501 (c) of the Internal Revenue Code of 1954;

2. Whether a current annual alcoholic beverage license for serving alcoholic beverages has been issued by the Virginia Alcoholic Beverage Control Board to such organization, for use on such property;

3. Whether any director, officer, or employee of the organization is paid compensation in excess of a reasonable allowance for salaries or other compensation for personal services which such director, officer, or employee actually renders;

4. Whether any part of the net earnings of such organization inures to the benefit of any individual, and whether any significant portion of the service provided by such organization is generated by funds received from donations, contributions, or local, state or federal grants;

5. Whether the organization provides services for the common good of the public; specific consideration will be given to the level of services provided for the common good of the public to citizens of Isle of Wight County. At least a minimum of 50% of the organization services should be provided to citizens of Isle of Wight County. The organization should have been providing services in Isle of Wight County for a minimum of three years.

6. Whether a substantial part of the activities of the organization involves carrying on propaganda, or otherwise attempting to influence legislation and whether the organization participates in, or intervenes in, any political campaign on behalf of any candidate for public office;
7. Whether the organization has rules, regulations, policies, or practices that discriminate on the basis of religious conviction, race, color, sex, or national origin.

8. The revenue impact to the locality and its taxpayers of exempting the property; The County shall assess the County service requirements for the facility requested to be exempted and the financial impact of any exempted tax burden shift to the taxpaying citizens and businesses.

C. Exemptions of property from taxation under this article shall be strictly construed in accordance with Article X, Section 6 (f) of the Constitution of Virginia.

D. "Nothing in this section or in any ordinance adopted pursuant to this section shall affect the validity of either a classification exemption or a designation exemption granted by the General Assembly prior to January 1, 2003, pursuant to Article 2 (§58.1-3606 et seq.), 3 (§58.1-3609 et seq.) or 4 (§58.1-3650 et seq.) of the Code of Virginia or this chapter. An exemption granted pursuant to Article 4 (§58.1-3650 et seq.) of the Code of Virginia or this chapter may be revoked in accordance with the provisions of §58.1-3605.

E. Triennial Application for Exemption; Removal by Local Governing Body

In accordance with §58.1-3605 of the Code of Virginia, organizations receiving exemption from real and/or personal property taxation by the Isle of Wight Board of Supervisors shall be required to file triennially an application as a requirement for retention of the exempt status of the property. Such application shall show the ownership and usage of such property and shall be filed within sixty days preceding the tax year for which such exemption, or the retention thereof, is sought. The requirement to file a triennial application to maintain exempt status shall be written into the ordinance designating an organization as exempt from real and/or personal property taxes.

The Board of Supervisors may submit to the General Assembly a list of those organizations whose property is designated as tax exempt under §58.1-3650.1 et seq. which the local governing body wants to remove from its exempt property list. Legislation including such a list must be introduced no later than the first calendar day of any session of the General Assembly unless requested by the Governor.

F. Application Submission

1. Applications are available in the Commissioner of the Revenue's Office located at 17090 Monument Circle, Suite 113. Please attach all required documents.

2. Return the completed application to the Commissioner of the Revenue's Office, 17090 Monument Circle, Suite 113, Isle of Wight, Virginia 23397 along with a check for the cost of the public hearing advertisements, as specified in the fee schedule of the fiscal year operating budget, and made payable to Treasurer, Isle of Wight County, Virginia.

3. Within 45 business days of receipt of the application, the Commissioner of the Revenue's Office will review the application for completion and notify the organization if additional information is needed then forward it, with any additional information pertinent to the application, to the County Administrator's Office for action of the Board of Supervisors within 45 days after receipt from the Commissioner of the Revenue's Office.

4. The County Administrator's Office will coordinate the placement of the public hearing advertisements in accordance with County Policy. The advertisements will state the date, time, and location of the meeting. ***It is highly recommended that the person(s) completing the application attend the Public Hearing. If such individual(s) cannot be present, the organization should send an authorized representative.***

5. Upon conclusion of the Public Hearing, a prepared ordinance will be introduced for consideration by the Board of Supervisors. If the Board of Supervisors adopts the ordinance for exempt status, the exemption is valid for the next July 1st tax year and all future years unless revoked in accordance with the provision of *Code of Virginia* §58.1-3605.

6. If the Board of Supervisors does not approve the request for exempt status, the organization will be required to continue to file a tangible personal property return and/or continue paying taxes related to real and/or personal property assessments.

7. To be considered for each July 1st, **the application must be received by the Commissioner of the Revenue's Office by April 1**.

8. Approval of the application will provide for exemption for real and personal property tax.

Application for Exemption from Real Estate or Personal Property Taxes for Religious, Charitable, Patriotic, Historical, Benevolent, Cultural, or Public Park and Playground Use

1. **Name of Organization:** _____
2. **Property currently owned by:** _____
3. **Name of Authorized Agent and Title:** _____
4. **Mailing Address:** _____
5. **Contact Number for Authorized Agent:** _____
6. **Property Location (include parcel map number and street address):** _____

   _____
7. **Description of organization's activities and the services provided to the public. Include in this section any charges for services or receipts of in-kind contributions or gifts:**

   _____

   _____

   _____
8. **Provide basis for application:**

   _____

   _____

   _____
9. **Specific activities conducted on premises:**

   _____

   _____

   _____
10. **Specific activities on premises NOT a part of organization:**

    _____

    _____

    _____
11. **If a residence, indicate occupant's relationship to the organization:**

    _____
12. **Organization receiving rent or income from property:** _____
13. **Date property will be occupied for Tax Exempt purposes:** _____

14. In addition, please attach supporting documentation related to the following:

1) A copy of the determination from the IRS regarding tax-exempt status pursuant to §501(c) of the Internal Revenue Code of 1954.

2) A statement signed by an officer indicating whether a current annual alcoholic beverage license for serving alcoholic beverages has been issued by the Virginia Alcoholic Beverage Control Board to the organization for use on its property. A copy of the organization's current alcoholic beverage license issued by the Virginia Alcoholic Beverage Control Board. If no license is held, check here _____

3) A copy of the organization's most current compensation schedule in order to determine if any director, officer, or employee is paid compensation in excess of a reasonable allowance.

4) A copy of the Internal Revenue Service form 990, 990EZ, or 990PF together with any schedules and attachments most recently filed with the IRS for the previous calendar year or an explanation why such form was not filed.

5) A statement from the organization clearly indicating whether the property is to be used for religious, charitable, patriotic, historical, benevolent, cultural, or public park and playground purposes as set forth in Article X, Section 6 (a)(6) of the Constitution of Virginia.

6) A list of names and addresses of the current officers and directors of the organization.

7) A copy of all fictitious names certificated, if any, filed by the organization with either the State Corporation Commission or the Isle of Wight County Circuit Court.

8) Copies of current financial statements, including a list of the individuals or entities to whom the net earnings of the organization inure. The list must indicate the amount or percentage of the net earning inuring to each individual or entity.

9) A statement signed by an officer of the organization indicating whether any significant portion of the service provided by the organization is generated by funds received from donations, contributions, or local, state, or federal grants. This statement must include an indication of the percentage of service generated by such funds. Donations shall include the providing of personal services or the contribution of in-kind or other material services.

10) A copy of the current articles of incorporation and bylaws of the organization.

11) A statement signed by an officer indicating whether the organization has any rule, regulation, policy, or practice that unlawfully discriminates on the basis of religious conviction, race, color, sex, or national origin.

12) A description of how the organization provides services for the common good of the public, specifically identifying the amount or level of service provided to Isle of Wight County Citizens and the length of time these services have been provided in Isle of Wight County. To

be considered, the organization should provide, on average, 50% of its services and community benefit to Isle of Wight citizens and the length of time these services have been provided within Isle of Wight County should be three (3) years or greater.

13) Any other information the organization believes is supportive of its request for tax exemption.

AFFIDAVIT: The undersigned ____ Property owner, or _____ Duly authorized

agent/representative thereof [check one], certifies that this application and the foregoing answers, statements, and other information herewith submitted are in all respects true and correct to the best of their knowledge and belief. WITH THE UNDERSTANDING THAT ANY INCORRECT INFORMATION SUBMITTED MAY RESULT IN THE DELAY OR RESCHEDULING OF APPROVAL BY THE BOARD OF SUPERVISORS.

Signed: _____

Printed Name: _____

Tile_____
(Officer, Member, etc. with authority to bind the Organization)

Date: _____

Isle of Wight
Application for Exemption from Real Estate or Personal Property Taxes
Evaluation Summary

Application Routing Number: _____

Application received by Commissioner of the Revenue: _____

Application received by County Administrator: _____

Organization Name: _____

Property Address: _____

_____

Assessed Value: _____

Parcel Map # _____

Tax I.D. # _____

Qualifying Status:

Religious		Benevolent	
Charitable		Cultural	
Patriotic		Public Park	
Historical		Playground Use	

Application for exemption received for:

Real Property		Personal Property	

Criteria Evaluated:

		Comments	Supports Application?
1	Is the organization exempt from taxation pusuant to section 501 (c) of the internal Revenue Code of 1954?		
2	Has a current annual alcoholic beverage license for serving alcoholic beverages been issued by the Virginia Alcoholic Beverage Control Board to such organization for use on property?		
3	Is the director, officer, or employee of the organization paid compensation in excess of a reasonable allowance for salaries or other compensation for personal services which such director, officer, or employee actually renders?		
4	Does any part of the net earnings of such organization inure to the benefit of any individual?		
4a	Is any significant portion of the service provided by such organization supported by funds received from donations, contributions, or local, state or federal grants?		
5	Does the organization provide services for the common good of the public? Special consideration shall be given to the level of services provided for the common good of the public to citizens of Isle of Wight County.		

5a	Is at least a minimum of 50% of the organization services and community benefit provided to citizens of Isle of Wight?		
5b	Has the organization operated for three (3) years within Isle of Wight County.		
6	Does a substantial part of the activities of the organization involve carrying on propaganda, or otherwise attempting to influence legislation and does the organization participate in, or intervene in, any political campaign on behalf of any candidate for public office?		
7	Does the organization have rules, regulations, policies, or practices which discriminate on the basis of religious conviction, race, color, sex, or national origin.		
8	Is there a significant revenue impact in the locality and its taxpayers for exempting the property? Isle of Wight County shall assess the County service requirements for the facility requested to be exempted and the financial impact of any exempted tax burden shift to the taxpaying citizens and businesses.		

Additional Comments:

Public Hearing Ad Placed in: _____ **Date of Ad:** _____
(attach certification)

Public Hearing Date: _____

Board of Supervisors Action **Date:** _____
(minimum of 5 days post public hearing date)

Approval July 1st of: [ ] (year) Real Property [ ] Personal Property [ ]

Denial: [ ] Real Property [ ] Personal Property [ ]

Board of Supervisors Action Processed By Authorized Representatives:

County Administrator: _____ Date _____

Commissioner of the Revenue: _____ Date: _____

ISSUE:

Resolution to Approve the VDOT FY2022-2027 Secondary Six Year Improvement Plan

BACKGROUND:

The Secondary Six Year Improvement Plan for FY22 is showing an overall increase of about $150,000 total through FY 27. Most of this increase is found in the outer year projections for FY 26 and FY27. Accounting for this funding increase, a new unpaved roads project was added to the plan in FY26. No projects were removed from the plan. The Rattlesnake Trail paving project was reassigned from County Administration to VDOT Administration through the Franklin Residency for completion in FY22/23. We anticipate that this change in administration may result in project cost savings which may be able to be applied to future paving projects.

The new project being added will be a Rural Rustic pave-in-place project of approximately 0.5 miles of public roadway at Blairs Creek Way (Route 713) west of Smithfield in the Hardy Election District. This road serves 12 current residences, and connects to Woody Acres Way, which is also in the SYIP for paving in FY 23/24. The total cost estimate for Blairs Creek Way is currently $364,161. Based on the funding increase of $150,000, this leave the project approximately $200,000 short of full construction funding within the current SYIP. Cost savings realized from the Rattlesnake Trail paving project are anticipated to fully fund this project by FY26.

Morgarts Beach paving, Clydesdale paving, and Turner Drive turn lane projects have been completed and will be removed from the plan in FY23 after final VDOT close out.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Adopt a resolution approving the FY2022-2027 SYIP.

ATTACHMENTS:

Upload

Description	Type	Date
Resolution	Resolution Letter	4/30/2021
FY22-27 Secondary System Construction Program	Backup Material	4/30/2021
Blairs Creek Way Project Sheet	Backup Material	5/12/2021

RESOLUTION OF THE BOARD OF SUPERVISORS OF ISLE OF WIGHT COUNTY TO APPROVE PRIORITIES FOR THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S SECONDARY SIX-YEAR IMPROVEMENT PROGRAM FOR FY 2022 THROUGH FY 2027

WHEREAS, Sections 33.2-331 of the Code of Virginia (1950, as amended) provide the opportunity for each county to work with the Virginia Department of Transportation (VDOT) in developing a Secondary Six-Year Improvement Program (SSYIP); and,

WHEREAS, this Board has held a public hearing on the proposed Plan (FY 2022-FY 2027), in accordance with VDOT policies and procedures, on May 20, 2021 and all citizens of the County had the opportunity to make comments and recommendations concerning the proposed Program; and,

WHEREAS, VDOT Local Program and Residency staff have reviewed and concurred with the proposed SSYIP (FY 2022-FY 2027).

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight Virginia that the Secondary Six-Year Improvement Program for FY 2022-2027 is hereby approved, as presented at the public hearing.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to execute all Program documents and make such accounting adjustments and execute such agreements and contracts for projects as necessary to proceed with the Program as approved.

Adopted this 20th day of May 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills-Storm, Clerk

Approved as to Form:

_____
Robert W. Jones, Jr., County Attorney

Secondary System
Isle of Wight County
Construction Program
Estimated Allocations

Fund	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	Total
TeleFee	$106,030	$106,030	$106,030	$106,030	$106,030	$106,030	$636,180
District Grant - Unpaved	$49,132	$73,840	$104,378	$104,378	$152,608	$152,608	$636,944
Total	$155,162	$179,870	$210,408	$210,408	$258,638	$258,638	$1,273,124

Board Approval Date:

Charles T. Catlett Jr.
Residency Administrator Date

Randy R. Keaton
County Administrator Date

District: Hampton Roads
County: Isle of Wight County
Board Approval Date: 2022-23 through 2026-27

Route	Road Name	Estimated Cost		Traffic Count
PPMS ID	Project #			Scope of Work
Accomplishment	Description			FHWA #
Type of Funds	FROM			Comments
Type of Project	TO			
Priority #	Length	Ad Date		
0646	Rattlesnake Trail	*PE*	$62,000	
104809	0646046649	*RW*	$0	Resurfacing
STATE FORCES/HIRED EQUIPMENT	Rural Rustic Paving Project (Rattlesnake Trail)	*CN*	$844,818	17005
S	Town Drive (Route 637)	*Total*	**$906,818**	
State forces/Hired equip CN Only	Ramsey Road (Route 622)			
9999.02	2.1	10/26/2022		
0637	Orbit Road	*PE*	$340,789	
91168	0637046573	*RW*	$126,637	Bridge Replacement w/o Added Capacity
RAAP CONTRACT	Rte 637 Over Nuby Run VA str. 6045	*CN*	$1,068,203	16011
BROS	0.016 MI. SOUTH OF NUBY RUN	*Total*	**$1,535,629**	
Single Hearing	0.017 MI. NORTH OF NUBY RUN			
9999.09		10/8/2013		
0673	Morgarts Beach Road	*PE*	$10,000	
-25170	0673046735	*RW*	$0	Reconstruction w/o Added Capacity
STATE FORCES/HIRED EQUIPMENT	Route 673 Reconstruct & Surface Treat Non-Hard Surface	*CN*	$576,500	17004
	Route 672 Blounts Corner Road	*Total*	**$586,500**	
State forces/Hired equip PE CN Only	Route 10 Bus-Old Stage Hwy			
9999.99	1.3			
0713	Blairs Creek Way	*PE*	$10,000	
-25169	0713046734	*RW*	$0	Reconstruction w/o Added Capacity
STATE FORCES/HIRED EQUIPMENT	Route 713 Reconstruct & Surface Treat Non-Hard Surface Road	*CN*	$266,300	17004
	Route 699 Woody Acres Way	*Total*	**$276,300**	
State forces/Hired equip PE CN Only	Dead End			
9999.99	0.4			
EN08	S. Church Street	*PE*	$0	
101793	EN08046115	*RW*	$268,710	Facilities for Pedestrians and Bicycles
NON VDOT	Construction of a pedestrian/bicycle trail - Segment 1	*CN*	$1,143,381	25028
STP	South Church Street	*Total*	**$1,412,091**	$71,000 transfer from #T4970 as per CTB (6/11).
Migration	Nike Park Road			
9999.99	1.3	3/3/2017		

EN08	S. Church Street	*PE*	$0	
101794	EN08046115	*RW*	$256,782	Facilities for Pedestrians and Bicycles
NON VDOT	Construction of a pedestrian/bicycle trail	*CN*	$5,519,061	25028
STP	Battery Park Road	*Total*	**$5,775,843**	$71,000 transfer from #T4970 as per CTB (6/11).
Migration	Nike District Park			
9999.99	1.8		3/3/2017	
0258	Main Street	*PE*	$135,000	
102951	0258046626	*RW*	$5,000	Facilities for Pedestrians and Bicycles
NON VDOT	Main Street Pedestrian Improvements	*CN*	$1,290,000	23128
CM	Route 10	*Total*	**$1,430,000**	
LAP Tier 1 PE, RW, CN (PH, RFP)	Route 10 (Intersection)			
9999.99			3/11/2022	
0644	Turner Drive	*PE*	$8,727	
103021	0644046628	*RW*	$0	Traffic Management/Engineering
NON VDOT	Turner Drive Intersection Improvements at Benns Church Blvd	*CN*	$545,667	25024
STP	Benns Church (Route 10/32)	*Total*	**$554,394**	Locally administered. Balance to be addressed at CN completion
Migration	Benns Church (Intersection)			
9999.99	0.1		4/9/2019	
0699	Woody Acres Way	*PE*	$0	
115872	0699046722	*RW*	$0	Reconstruction w/o Added Capacity
STATE FORCES/HIRED EQUIPMENT	Route 699 Reconstruct & Surface Treat Non-Hard Surfaced Road	*CN*	$347,000	17004
MAINT	Route 679 Bethel Church Lane	*Total*	**$347,000**	
State forces/Hired equip CN Only	Dead End			
9999.99	0.8		6/16/2025	

RURAL RUSTIC ROAD PROJECT

Road Name	Blairs Creek Way	**Location**	West of Smithfield
State Rte No.	SR 713	**Project Length**	0.5 Miles
From	SR 699 (Woody Acres Way)	**Residences Served**	12
To	Dead End		
Turnaround	None existing, sufficient space at end to provide		

Design Considerations	Existing road is in good condition and has sufficient width. Extra shoulder width can be provided. Tie to the Woody Acres Way project.	**Exist. Width**	20'-24'
Safety Considerations	N/A		
Drainage Considerations	Existing roadside ditches and concrete culvert identified in the field.		
Environmental Considerations	N/A		
Estimated Project Costs	**$364,160**		

OPINION OF PROBABLE CONSTRUCTION COST				
BLAIRS CREEK WAY - APPROXIMATELY 0.5 MILES				
ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
Mobilization	LS	1	$ 30,000.00	$ 30,000.00
Earthwork	LS	1	$ 35,000.00	$ 35,000.00
Aggregate Base Material, No 21B	TON	2300	$ 40.00	$ 92,000.00
Blotted Seal Coat, Type D	SY	6100	$ 10.00	$ 61,000.00
PE-1, TYPE I, Crusher Run Material	TON	50	$ 60.00	$ 3,000.00
Aggregate Material, No 3	TON	20	$ 55.00	$ 1,100.00
Install Ground Mounted Sign	EA	2	$ 1,000.00	$ 2,000.00
Erosion and Sediment Control Measures	LS	1	$ 7,500.00	$ 7,500.00
Maintenance of Traffic	LS	1	$ 10,000.00	$ 10,000.00
			SUBTOTAL	**$ 241,600.00**
Contingency (20%)				$ 48,320.00
Engineering				$ 20,000
Pavement Testing				$ 3,000.00
CEI Costs (10%)				$ 24,160.00
Project Administration (5%)				$ 12,080.00
VDOT				$ 15,000.00
			TOTAL PRICE THIS PROJECT	**$ 364,160.00**

* An 18’ wide paved section was assumed for estimating pavement costs for this project. A 20’ wide section was used to estimate aggregate base material, which would include both the pavement sections and shoulders. The pavement section was assumed to be equivalent to the pavement section provided by VDOT on previous Rural Rustic Road jobs: 6” of Aggregate Base 21A or 21B and a Blotted Seal Coat surface

ISSUE:

List of Recipients of Caught You Caring Awards for the Third Quarter of FY2020-21

BACKGROUND:

The County has previously established a Caught You Caring Award (formerly Spot Award) Program to recognize, appreciate, and reward employees for outstanding public service. This program provides monetary rewards to selected employees who perform beyond expectations and serves to highlight the excellence that exists in all areas and job functions across the County.

BUDGETARY IMPACT:

Funding for the Awards was included in the FY2020-21 Operating Budget.

RECOMMENDATION:

For the Board's information.

ATTACHMENTS:

Description	Type	Upload Date
Caught You Caring Awards Summary - 3rd Quarter	Backup Material	4/22/2021

Caught You Caring Awards
Summary of Recipients - FY 21 - Third Quarter

Department	Recipient Name & Job Title	Reason Received / Comments
Treasurer's Office	Judith Wells, Treasurer	Treasurer, Judith Wells recognized Ms. Amy Vann, Utilities Department within the Treasurer's Office has taken on the extra duties of implementing the Cares Act. Ms. Amy Vann sent applications and has handled extremely high volume of intense telephone calls and follow-ups. Going above and beyond regular duties.
Treasurer's Office	Judith Wells, Treasurer	Treasurer, Judith Wells recognized Ms. Reginia Crocker, Utilities Department within the Treasurer's Office has taken on the extra duties of implementing the Cares Act. Ms. Reginia Crocker sent applications and has handled extremely high volume of intense telephone calls and follow-ups. Going above and beyond regular duties.
Treasurer's Office	Judith Wells, Treasurer	Treasurer, Judith Wells recognized Ms. Julie Slye, Deputy Clerk III has taken on the responsibilities of another employee while we were in the search of replacing the employee. In doing so has keep things moving so not to be so far behind until replacement was found. Ms. Julie Slye has gone above and beyond in her position during this time.

Caught You Caring Awards
Summary of Recipients - FY 21 - Third Quarter

County Administrator and Department of Emergency Services	Randy Keaton, County Administrator and Chief Pat Humphries	Isle of Wight Emergency Services and Carrollton Vol Fire Department members received an award from Riverside Hospital . The crew responded to a call for a heart attack. The crew was able to recognize the patient as a potential STEMI (heart attack) and acted quickly. Time is of the essence when managing a patient having a heart attack. It is of vital importance to get the blood vessels of the heart open as soon as possible. Every minute that goes by, more heart muscle is going to die. Responding quickly to the incident, time management of the scene, and alerting the hospital of a STEMI patient was vital to saving the patient's life. Riverside Hospital presented Delany Townsend, Chris Smith, LeVoris Franklin, and Kaven Melton with the heart saver award for their quick action and excellent care that contributed to a good outcome for the citizen. This is an example of our Fire-Rescue responders making an impact on our citizens and visitors lives, making a difference in the community and keeping them safe.
Budget & Finance	Linda Tuck, Human Resources Coordinator	Linda Tuck, HR Coordinator recognized Ms. Kay McKee, Payroll Technician and Ms. Donna Proffitt, Senior Accountant with Budget & Finance for working together going above and beyond with reports and mid year changes with payroll and VRS Retirement.

BACKGROUND:

The matters attached to this Board report are included as a means of providing information to the Board relative to matters of interest. These items do not require any action by the Board.

BUDGETARY IMPACT:

None

RECOMMENDATION:

For the Board's information.

ATTACHMENTS:

Description	Type	Upload Date
Delinquent Tax Collections - April 2021	Backup Material	5/6/2021
Cash Position - March 2021	Backup Material	4/29/2021
Statement of Treasurers Accountability - March 2021	Backup Material	4/29/2021
Website Statistics - April 2021	Backup Material	5/5/2021
Museum Report - April 2021	Backup Material	5/5/2021
Correspondence from Spectrum	Backup Material	5/5/2021

COUNTY OF ISLE OF WIGHT
TAX BILLINGS & COLLECTIONS AS OF APRIL 2021

REAL ESTATE

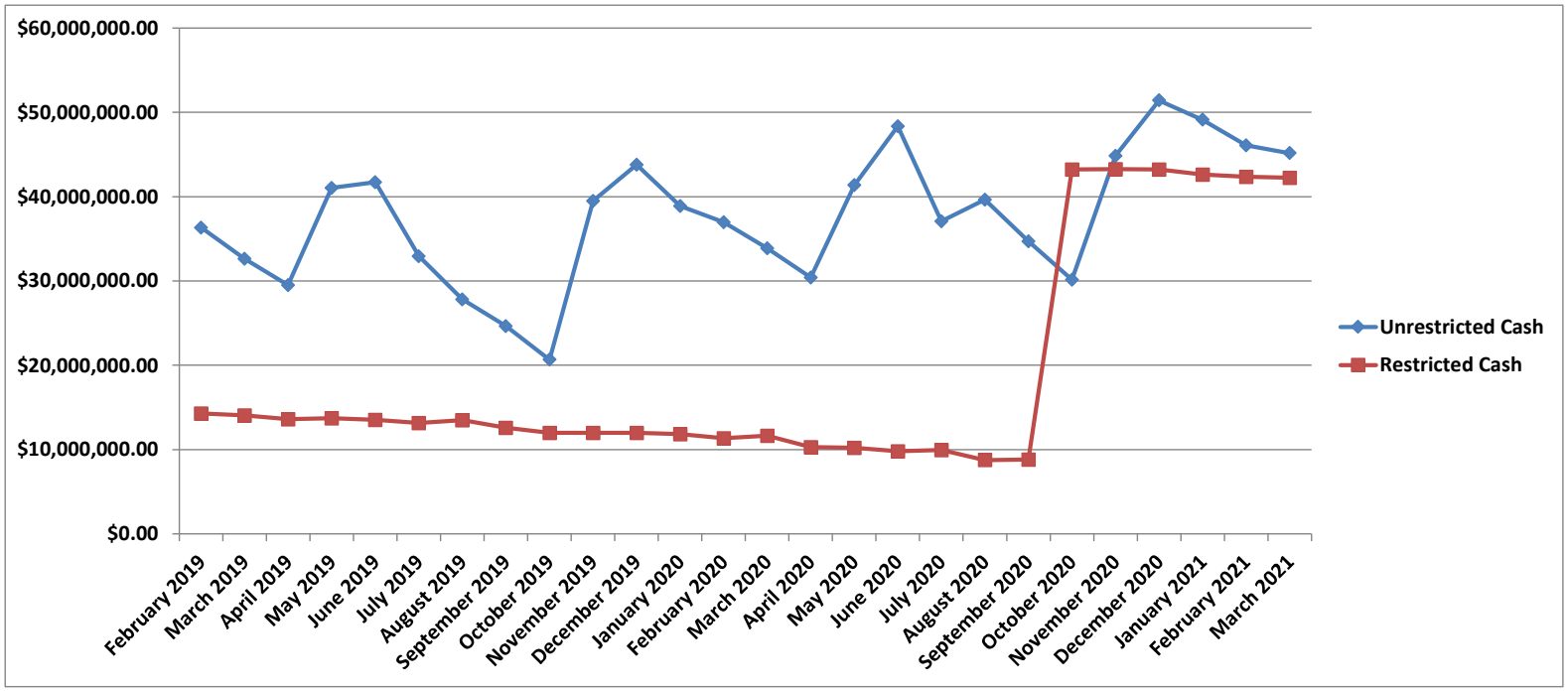
TAX YEAR	TAX LEVY	SUPPLEMENTS	PUBLIC SERVICE	ADJUSTMENTS & ABATEMENTS	TOTAL TAX LEVIES	TAX COLLECTED	**TAX OUTSTDG.**	% COLLECTED	% UNC.
Prior 2015					$ 169,104,271.58	$ 169,101,022.70	$ 3,248.88	100.00%	0.00%
2015-2016	$ 36,001,746.53	$ 248,230.50	$ 1,286,485.55	$ (708,816.42)	$ 36,827,646.16	$ 36,820,988.20	$ 6,657.96	99.98%	0.02%
2016-2017	$ 36,430,832.13	$ 316,107.66	$ 1,450,155.11	$ (695,265.51)	$ 37,501,829.39	$ 37,492,740.61	$ 9,088.78	99.98%	0.02%
2017-2018	$ 37,210,991.03	$ 217,245.56	$ 1,499,216.98	$ (784,644.08)	$ 38,142,809.49	$ 38,129,213.68	$ 13,595.81	99.96%	0.04%
2018-2019	$ 37,640,722.98	$ 236,418.34	$ 1,395,368.74	$ (903,914.10)	$ 38,368,595.96	$ 38,330,941.16	$ 37,654.80	99.90%	0.10%
2019-2020	$ 39,703,728.23	$ 227,301.63	$ 1,455,114.04	$ (1,108,687.18)	$ 40,277,456.72	$ 40,124,715.15	$ 152,741.57	99.62%	0.38%
2020-2021	$ 20,132,292.88	$ 56,970.03	$ 1,637,435.57	$ (1,191,014.14)	$ 20,635,684.34	$ 20,436,015.25	$ 199,669.09	99.03%	0.97%
Note						**DELINQUENT REAL ESTATE =**	$ 422,656.89	99.89%	0.13%

Billing for June is $19,644,302.06, with payments $785,465.89

PERSONAL PROPERTY

TAX YEAR	TAX LEVY	SUPPLEMENTS	PUBLIC SERVICE	ADJUSTMENTS & ABATEMENTS	TOTAL TAX LEVIES	TAX COLLECTED	**TAX OUTSTDG.**	% COLLECTED	% UNC.
prior 2013					$ 120,815,788.72	$ 120,801,901.79	$ 13,886.93	99.99%	0.01%
2015	$ 12,710,875.80	$ 1,132,840.54	$ 39,336.13	$ (2,330,458.92)	$ 11,552,593.55	$ 11,516,165.33	$ 36,428.22	99.68%	0.32%
LIC. FEE	$ 972,558.00	$ 156,260.00	$ -	$ (102,836.12)	$ 1,025,981.88	$ 1,016,955.16	$ 9,026.72	99.12%	0.88%
2016	$ 13,507,039.33	$ 1,380,743.87	$ 33,805.90	$ (1,074,571.63)	$ 13,847,017.47	$ 13,799,757.25	$ 47,260.22	99.66%	0.34%
LIC. FEE	$ 922,063.00	$ 172,022.00	$ -	$ (48,567.00)	$ 1,045,518.00	$ 1,035,993.48	$ 9,524.52	99.09%	0.91%
2017	$ 20,526,995.84	$ 1,403,829.87	$ 30,862.41	$ (2,389,651.57)	$ 19,572,036.55	$ 19,509,996.96	$ 62,039.59	99.68%	0.32%
LIC. FEE	$ 953,161.00	$ 175,816.00	$ -	$ (50,085.00)	$ 1,078,892.00	$ 1,065,202.81	$ 13,689.19	98.73%	1.27%
2018	$ 14,385,655.01	$ 1,440,240.69	$ 29,880.46	$ (1,090,967.61)	$ 14,764,808.55	$ 14,675,947.84	$ 88,860.71	99.40%	0.60%
LIC. FEE	$ 995,518.00	$ 172,198.00	$ -	$ (89,048.00)	$ 1,078,668.00	$ 1,059,722.38	$ 18,945.62	98.24%	1.76%
2019	$ 15,920,628.76	$ 1,449,455.97	$ 38,859.89	$ (1,024,155.44)	$ 16,384,789.18	$ 16,163,156.39	$ 221,632.79	98.65%	1.35%
LIC. FEE	$ 986,732.00	$ 133,181.00	$ -	$ (43,456.00)	$ 1,076,457.00	$ 1,038,465.03	$ 37,991.97	96.47%	3.53%
2020	$ 16,352,666.74	$ 1,274,375.35	$ 38,691.28	$ (935,934.36)	$ 16,729,799.01	$ 16,088,703.69	$ 641,095.32	96.17%	3.83%
LIC. FEE	$ 942,740.00	$ 108,439.00	$ -	$ (22,870.00)	$ 1,028,309.00	$ 934,393.77	$ 93,915.23	90.87%	9.13%
Notes:						**DELINQUENT PERSONAL PROP. =**	$ 1,294,297.03	99.41%	0.59%
2021 PP Prepay - $312,866.58						**TOTAL DELINQUENT=**	**$ 1,716,953.92**	99.71%	0.30%

CASH POSITION



COUNTY OF ISLE OF WIGHT

STATEMENT OF THE TREASURER'S ACCOUNTABILITY
March 2021

Institution	Instrument	Rate	Earnings Credit	Balance	Previous Year Balance
	Cash				
	Petty Cash			$2,050.00	$2,000.00
SUB TOTAL					
	Checking Accounts				
Bank of America	General Fund Checking		0.20%	$5,143,839.37	$1,392,467.68
Bank of America	School General Fund Checking		0.20%	$8,272,261.84	$6,171,468.95
Bank of America	DSS General Fund Checking		0.20%	$2,453,581.44	$2,347,620.41
Bank of America	County Payroll Account		0.20%	$80,000.54	$78,804.39
Bank of America	School Payroll Account		0.20%	$746,271.72	$0.00
Bank of America	DSS Payroll Account		0.20%	$233.34	$0.00
SUB TOTAL				**$16,696,188.25**	**$9,990,361.43**
	Investments				
Bank of America	Emergency Fund Checking	0.18%		$2,596.99	$2,592.56
LGIP	General Fund Investment	0.10%		$4,151,276.50	$4,141,893.57
VIP	VIP Long Term	0.11%		$81,476.78	$81,116.08
VIP	VIP Short Term	0.11%		$24,233,755.62	$16,190,150.88
SUB TOTAL				**$28,469,105.89**	**$20,415,753.09**
	Restricted Funds				
Bank of America	School Escrow Fund	0.18%		$0.00	$24,205.20
Bank of America	General Recoupment Funds	0.18%		$27,005.72	$18,850.57
Bank of America	Special Welfare Funds	0.18%		$0.00	$0.00
Bank of America	Special Welfare Donated Funds	0.18%		$12,188.63	$13,660.69
Bank of America	Special Welfare Child Support	0.18%		$201.97	$281.50
Bank of America	School's Camp Foundation	0.18%		$24,862.40	$24,820.11
Farmers Bank	School Food Service Funds	0.20%		$670,977.25	$646,809.93
BNY Mellon	Pace Funds			$2,738,584.55	$3,402,865.59
SUB TOTAL				**$3,473,820.52**	**$4,131,493.59**
	Bond Proceeds--Invested in SNAP				
	2010B Bond Interest	0.12%		$32.81	$88,497.33
	2010C Bond			$0.00	$49,844.17
	2010C Bond Interest	0.12%		$35.79	$46,673.49
	2011A Bond Interest	0.12%		$41.88	$112,872.16

	2011B Bond			$0.00	$156,620.58
	2011B Bond Interest	0.12%		$20.77	$55,860.17
	2012 Bond			$1,262,336.58	$1,290,336.58
	2012 Bond Interest	0.12%		$114,697.49	$148,649.83
	2012 Public UtilityBond			$1,946,529.87	$2,730,977.35
	2012 Public Utility Bond Interest	0.12%		$331,618.60	$324,287.93
	2016 Bond			$364,938.28	$430,596.61
	2016 Bond Interest	0.12%		$199,849.57	$198,255.62
	2017 Bond			$0.00	$331,036.29
	2017 Bond Interest	0.12%		$28.35	$189,650.70
	2020A Bond			$34,532,327.41	$0.00
	2020A Bond Interest	0.12%		$21,441.84	$0.00
SUB TOTAL				**$38,773,899.24**	**$6,154,158.81**
TOTAL OF ALL FUNDS				**$87,415,063.90**	**$40,693,766.92**

Isle of Wight Website Stats (1 - 30 April 2021)

Page	Rank	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit
/county_home_page	1	13,250	9,953	0:01:33	9,303	39.18%	44.82%
/our_community/county_fair/spring_fest.php	2	3,440	2,945	0:04:47	1,463	84.21%	77.50%
/our_community/county_fair/index.php	3	3,041	2,447	0:00:42	2,172	32.46%	32.26%
/government/commissioner_of_the_revenue/real_estate_assessments.php	4	2,288	1,760	0:02:41	1,229	67.05%	62.46%
/departments/information_technology/mapping_and_gis.php	5	1,826	1,378	0:02:22	922	64.21%	56.85%
/our_services/animal_services/index.php	6	1,750	1,256	0:01:04	929	53.28%	44.11%
/our_services/permits/index.php	7	1,564	1,168	0:00:48	253	51.38%	24.87%
/our_community/farmers_market/index.php	8	1,507	1,266	0:02:36	1,230	75.45%	73.39%
/our_community/county_fair/truck___tractor_pull.php	9	1,414	1,190	0:03:29	1,074	74.30%	70.58%
/i_want_to_/pay_for/index.php	10	1,360	831	0:00:36	45	31.11%	11.84%
/government/treasurer/making_a_payment.php	11	1,026	773	0:03:19	214	57.01%	47.66%
/departments/parks_and_recreation/index.php	12	1,000	781	0:01:16	385	50.39%	40.40%
/government/commissioner_of_the_revenue/index.php	13	983	750	0:00:43	107	47.66%	18.11%
/departments/index.php	14	935	694	0:00:43	255	29.02%	18.29%
/departments/human_resources/index.php	15	879	749	0:02:26	232	75.43%	64.96%
/departments/public_utilities/making_payments.php	16	767	630	0:03:05	185	62.16%	52.28%
/our_community/county_fair/demolition_derby.php	17	739	613	0:03:26	519	68.79%	64.14%
/index.php	18	720	586	0:01:07	67	41.79%	22.36%
/government/commissioner_of_the_revenue/real_estate.php	19	684	495	0:00:12	43	23.26%	4.39%
/government/clerk_of_the_circuit_court/index.php	20	683	507	0:01:32	308	59.74%	44.22%
/i_want_to_/index.php	21	589	416	0:00:42	20	50.00%	17.15%
/government/treasurer/real_estate_tax.php	22	549	418	0:01:08	270	33.33%	29.69%
/government/county_board_of_supervisors/index.php	23	523	364	0:01:55	179	42.46%	29.25%
/departments/planning_and_zoning/index.php	24	491	365	0:01:19	126	43.65%	24.85%
/our_services/index.php	25	476	372	0:00:42	49	48.98%	24.37%
/government/index.php	26	453	329	0:00:34	59	33.90%	15.45%
/departments/building_inspections/online_inspection_requests_and_results.ph	27	440	375	0:04:10	188	80.85%	69.32%
/departments/solid_waste/refuse_and_recycling_centers.php	28	430	401	0:02:15	379	86.54%	84.42%
/departments/budget_and_finance/rfps_and_ifbs.php	29	427	368	0:00:31	298	74.50%	62.30%
/government/treasurer/personal_property_tax_information.php	30	420	325	0:01:27	249	38.15%	35.71%

Town of Smithfield

Isle of Wight County Museum

April 2021 Report

J.L. England, Museum Director

Notable

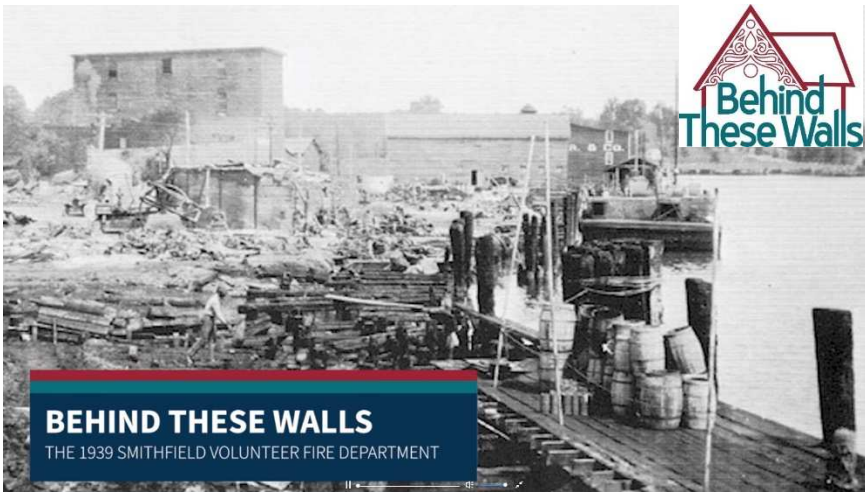
- **COVID-19 PANDEMIC**. The museum was closed from March to July 2020. Now open for visitors, these protocols remain in place:
    - All staff and visitors must wear masks.
    - A hand sanitizer station was installed at the museum's entrance. A service company refills it each month.
    - Most of the museum's high-touch objects – to include our archaeological sandbox – have been removed or restricted.
    - Staff regularly cleans and documents sanitizing of high-touch surfaces.
- Volunteer hours: 93
- The museum was closed for Easter, April 4.
- On Aug. 26, we welcomed our new docent Teresa Sines.

Isle of Wight County Museum 103 Main Street Smithfield

- Visitation: 592
- Special Events
    - April 3. **Battle of Smithfield Lecture and Tour**. Meet your guide at the museum for a brief overview of this Civil War battle. Afterwards, program participants will walk to several sites along Main Street and Church Street to note the locations of significant events from January 30 to February 2, 1864. 5 guests.
    - April 18. **Raise the Roof**. Colonial America was rich in magnificent forests that crowded its settlements. The plentiful timber was tall, straight and knot-free and therefore a favorite building material in the New World. Learn about the processes and tools behind the construction of colonial buildings and barns with lecturer Roger Healy. This program will show off numerous tools and the joints associated with strong structures. The event will take place at the museum, and it will be livestreamed on the museum's Facebook page. 18 guests.

- April 25. **What is Fashion? Clothing from 1780 to 1825**. (Zoom lecture.) *Presentation from the Daughters of the American Revolution Museum and hosted by Jane Amelon, Daughters of the American Revolution Corresponding Docent.* In a 1783 newspaper article, it was suggested that fashion functioned as "an agreeable tyrant," in the sense that consumers are subject to it, yet happy to follow its arbitrary dictates. This presentation presents men's and women's clothing from 1780 to 1825 and considers how Americans wrestled with the political implications of fashion in the post-Revolutionary era. After declaring independence, Americans wanted to create a new national identity – and attain international credibility; but how could we rely on foreign imports while maintaining our newly found independence. What was a patriotic American to wear? 17 guests.

- Behind These Walls
  - People, objects and places all tell stories, and it is the history of a community that shows its unique character. This video series allows some of the county's most interesting structures to share their stories. This project launched in October 2020. Highlighted this month were **1939 SMITHFIELD VOLUNTEER FIRE DEPARTMENT**, **COMMONWEALTH GIN** and **BETHANY UNITED METHODIST CHURCH.** View all episodes here: www.historicisleofwight.com/behind-these-walls.html



- Livestreaming Events. We continue to connect to visitors, supporters, fans and the community via social media. Our livestreaming tours and programs on Facebook are driving traffic and enhancing interaction on our sites. Events this month, still viewable in the videos section of our Facebook page, include:
  - April 1. **LIVE at 12:05: Fort Huger.** Curator Mike Holtzclaw discusses Fort Huger, a teaser for the walking tour happening at the site at 10 a.m. on Saturday morning.
  - April 6. **LIVE at 12:05: April is National Poetry Month**. A reading of a 1929 poem about Smithfield written by Rev. Thomas Dunaway, pastor of Smithfield Baptist.
  - April 8. **LIVE at 12:05: Tell Me A Story (Spring).** Learn about springtime today. This program, geared for children ages 3 to 5, introduces youngsters to the symbols of Isle of Wight and features books, songs and games. Director Jennifer England hosts this monthly program virtually and highlights the theme of spring with a craft idea and a reading of "It's Spring" by Samantha Berger and Pamela Chanko.

- April 13. **LIVE at 12:05: Captain John Sinclair**. Docent Dee Campbell hosts this presentation on Smithfield's colorful ship's captain who was also known as a shipbuilder, farmer, entrepreneur and naval officer.
- April 15. **LIVE at 12:05: Upcoming Events.** Director Jennifer England discusses several upcoming special events. Be prepared to mark your calendar.
- April 20. **LIVE at 12:05: Lt. Daniel Thomas Grinnan**. In our collection is Lt. Daniel Thomas Grinnan's uniform. Grinnan was the first Isle of Wight County resident to die in service during service in World War II. He was awarded the Purple Heart. Grinnan has a headstone in Ivy Hill Cemetery.
- April 22. **LIVE at 12:05: Vinegar and Ginger Switchel**. Director Jennifer England takes you to the kitchen at Windsor Castle to discuss vinegar. This kichen staple is used today in many of the same ways it was used 5,000 years ago - as a cleaner, a preservative and a recipe ingredient. Colonials loved drinking switchels, a drink made from vinegar, a sweetener, water and molasses. Jennifer made a ginger switchel and will sample it on camera.
- April 27. **LIVE at 12:05: National Poetry Month.** Curator Mike Holtzclaw shares a poem written by Elwood Carter Gunn about the town of Smithfield.
- April 28. **LIVE at 12:05: Mosquitoes and Sprayers.** Director Jennifer England covers a variety of topics including pesticides to highlight a 1950s Hudson sprayer in the museum's collection.

- Groups/Tours/Programs
  - April 1. Preschool group. Students from Hampton and Newport News. 8 children.
  - April 9. Preschool group, Smithfield. 10 students.
  - April 14. Byron United Methodist Church, Byron, Georgia. 7 guests.
- Gift Shop
  - No updates.
- Exhibit/Project Update
  - **English Telephone Box**. The phone box in front of the Bank of Southside Virginia belongs to the Isle of Wight County Museum. It is in need of repairs, media blasting and paint. Dishman Fabrications LLC of Yorktown has taken delivery of the phone box to their shop for the work. Anticipated replacement is early 2021.
  - **Civil War Trails.** Three new signs for Main Street, Fort Boykin and Fort Huger have been submitted. Awaiting approval, design and installation.
  - **Steamboats & Life on the Water.** In progress.

- **Theatre.** Awaiting the installation of the curtain.
- **Magnolia.** The porcine statue in front of the museum is back. After structural repairs to the statue and touch-up by artist Lois Tokarz, Town of Smithfield Public Works had to repair the brickwork and anchors which hold Magnolia in place.
- **Unusual Objects.** New exhibit under development.
- **Mercantilism and Country Store.** Updates are in production for these exhibits. Thanks to Isle of Wight County Public Works, a few adjustments were made to an old exhibit to reformulate it as a milk crate.
- **Online Exhibits Under Development**: Vietnam War Veterans in Isle of Wight County, Unsung Heroes of Isle of Wight County.

- Artifacts
  - Alyssa Bailey, a student at Old Dominion University, interned at the museum this semester to update the records for our textile collection. Her work enabled her to complete documentation for approximately 2/3 of our materials. ODU's history department has indicated interest in funneling more students our way for work with artifacts, interpretation and analysis.
- Staff Training
  - April 16. Webinar: Agents of Deterioration. Hosted by the Northeast Document Conservation Center.
  - April 22. Webinar. Civilian Response and Casualty Care. Hosted by Virginia Center for School and Campus Safety.
  - April 28. Webinar: Supervisor Training: Onboarding New Employees. Hosted by the Virginia Risk Sharing Association.

Financials

• Gift Shop Sales (including tax):	$ 1,261.07
• Donations:	$ 0.00
• Admission:	$ 879.50
• Program/Lecture Fees:	$
Total Monthly Deposit:	**$ 2,140.57**

Social Media/Online Presence

- Visit our website at www.historicisleofwight or www.hamcamva.com.

- **LIVE at 12:05.** Each Tuesday and Thursday, we host pop-up broadcasts on the museum's Facebook page. These programs were seen on the Ham Cam, but since COVID-19, programs and livestreaming from Facebook make these programs more mobile. Our

segments – shot in the museum or at any of our historic sites - highlight events at the museum, announcements or artifacts from our collection. Tune in each Tuesday and Thursday at 12:05 p.m. on the museum's Facebook page to learn a bit about local history.

- **Facebook:** Isle of Wight County Museum: 2,613 likes and 2,834 followers. Daily posts.
- **Facebook:** World's Oldest Ham: 177 likes and 182 followers. Semi-weekly posts.
- **Twitter.** @WorldsOldestHam. The world's oldest ham has his own account. 1,093 followers.
- **Instagram.** @Isleofwightcountymuseum. 712 followers.
- **Google Reviews.** 4.6/5 overall rating.
- **TripAdvisor.** 4.5/5 star overall rating.
- **Yelp.** 4.5/5 star overall rating.
- **Foursquare/Swarm.** 7.3/10 rating.

Media Coverage/Promotion/Advertising/Lobbying

- Various pieces in area publications to include calendars and events.
- April 8. ***Virginian-Pilot***. Article: The Daily Break's 2021 Peeps Show has arrived - https://www.pilotonline.com/entertainment/vp-db-peeps-shoot-2021-20210408-v7zvezeqtncjffc5weln5tbryu-photogallery.html.
- April 21. ***Smithfield Times***. Cutline: Cannonball Intoxication; Article: Budget hearing speakers seek funding for history programs.
- April 28. ***Smithfield Times***. Cutline: Welcome back Magnolia.

Outreach Lectures & Events

- April 6. Isle of Wight County Parks and Recreation Spring Break Camp at Carrollton Nike Park. Program theme: Victory Gardens. 18 kids.
- April 8. Smithfield Kiwanis. 21 guests.
- April 20. Williamsburg Regional Library. Virtual lecture: Medicine, Quackery and Patent Medicines. 12 guests.
- April 29. Smithfield Rotary. 10 guests.

Windsor Castle 705 Cedar Street, Smithfield

- Windsor Castle's outbuilding exhibits - smokehouse, farm manager's office, kitchen, laundry and slave quarters - are in progress. The smokehouse exhibit is complete.

Fort Boykin 7410 Fort Boykin Trail, Isle of Wight County

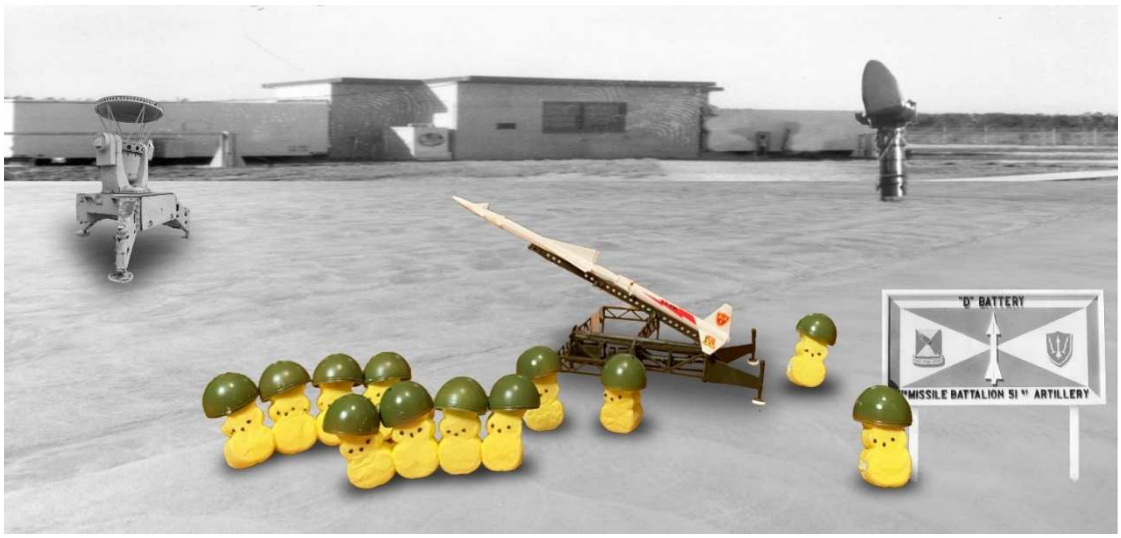
- No updates.

Fort Huger 15080 Talcott Terrace, Isle of Wight County

- April 3. **Walking Tour**. Visit this Civil War fort and learn the significance of this gateway to the Confederate capital. 10 guests.

Nike-Carrollton Park 13036 Nike Park Road, Carrollton

- April 10. **Walking Tour**. Visit one of the Cold War's few surviving Army Air-Defense Posts. Local historian Albert Burckard, along with former missile mechanic Ira Abbott, hosts a short presentation and a walking tour of this site which contains the original barracks, mess hall, administration and recreation building, officer/non-commissioned officer family housing, fueling area and underground missile magazines. Event begins in the Recreation Hall (former soldier barracks) at Nike Park. 10 guests.
- This image highlighting Nike Park's military history was submitted to the Virginian-Pilot's annual Peeps contest.



Boykin's Tavern, 1820 Clerk's Office & Isle of Wight County Court House Complex 17146 Monument Circle, isle of Wight County

- Boykin's Tavern Visitors: 0
- April 10. **Walking Tour**. Join us as we explore this 19th, 20th and 21st century site and share the story of its beginnings as well as a few tales of capers and duels. This tour begins and ends at Boykin's Tavern. 2 guests.

Meetings

- April 7. Peninsula Museums Forum.
- April 26. Schoolhouse Museum.
- April 27. 1750 Courthouse.
- April 28. Town of Smithfield staff meeting.
- April 29. Interview of possible intern from Christopher Newport University, Newport News.

Safety

- April 14. Town of Smithfield Safety Committee meeting.

Selections from Our Website and Social Media

April 13

Happy National Scrabble Day!

April 20

Today is Volunteer Recognition Day.

Our dedicated and energized volunteers assist with many tasks and projects. All of them make a big difference, and we are truly thankful.

April 22

Happy Earth Day! This 1907 tricycle in our collection is the perfect environmental solution for your morning commute.

#MuseumsGoGreen #GreenestObject

Donald T. Robertson

Subject: FW: Charter Communications - Upcoming Changes

Dear Franchise Official:

At Spectrum Southeast, LLC ("Spectrum") we continue to enhance our services in order to offer more entertainment and communication choices, and to deliver the best value to our customers. We are committed to offering our customers products and services we are sure they will enjoy.

Programming fees charged by TV networks we carry are the greatest single factor in higher cable prices, and continue to rise. Despite our best efforts to control these costs, this has resulted in a change in the rates we charge our customers.

Effective on or after May 2, 2021, customers are being noticed via bill message of the following monthly pricing changes, which will take effect on or after June 2, 2021. Customer promotional rates will not change until the end of the promotion period.

Services/Products/Equipment	Pricing Adjustment
Broadcast TV Surcharge	Will increase by $1.54. This reflects the costs incurred from local Broadcast TV Stations.
Seasonal Broadcast TV Surcharge	Will reduce by $6.45.
Spectrum Receiver/Digital Adapter	Will increase by $1.00 per receiver/adapter.
Charter Digital Home	Will increase by $10.00.
Spectrum TV Select	Will increase by $3.00.
Spectrum TV Silver	Will increase by $8.00*.
Spectrum TV Gold	Will increase by $8.00*.
Latino Tier	Will increase by $1.00.

* Except certain grandfathered/Active packages where increase is $3.00.

If you have any questions about this change, please feel free to contact me.

Sincerely,

Eric

Eric Collins | Director of Government Affairs
Charter Communications
6202 Raeford Road | Fayetteville, NC 28304

E-MAIL CONFIDENTIALITY NOTICE: The contents of this e-mail message and any attachments are intended solely for the addressee(s) and may contain confidential and/or legally privileged information. If you are not the intended recipient of this message or if this message has been addressed to you in error, please immediately alert the sender by reply e-mail and then delete this message and any attachments. If you are not the intended recipient, you are notified that any use, dissemination, distribution, copying, or storage of this message or any attachment is strictly prohibited.

ISSUE:

Application from Cavalier Solar A, LLC, for a Conditional Use Permit, CUP-3-19, to Construct and Operate a Major Utility Service Use Consisting of a Utility-Scale Solar Energy Generation Facility, Including Related Equipment, 34.5 kV Electrical Feeder Lines, Project Substation, and 500 kV Gen-Tie (Overhead) Transmission Line on Properties Zoned Rural Agricultural Conservation (RAC) on Burwells Bay Road, Jones Drive, Mill Swamp Road, and Pons Road and a Request from the Owners of Six Affected Parcels to Withdraw Their Properties from the Moonlight Agricultural/Forestal District

BACKGROUND:

Cavalier Solar A, LLC is seeking approval of a Conditional Use Permit, CUP-3-19, to construct and operate a major utility service use consisting of a utility-scale solar energy generation facility, including related equipment, 34.5 kV electrical feeder lines, project substation, and 500 kV gen-tie (overhead) transmission line. The project is located on properties zoned Rural Agricultural Conservation (RAC) on Burwells Bay Road, Jones Drive, Mill Swamp Road, and Pons Road, including Tax Parcels 10-01-017, 10-01-020, 10-01-021, 10-01-023, 10-01-024, 10-01-025, 10-01-027, 10-01-030, 11-01-005, and 11-01-015. The application includes a request from the owners of six affected parcels to withdraw their properties from the Moonlight Agricultural/Forestal District.

The project lies within the north-central area of the County adjacent to Surry County. The subject properties lie adjacent to three secondary roads that converge near the center of the project area: Mill Swamp Road (Route 621/626), Burwells Bay Road (Route 621), and Jones Drive (Route 626). Tax Parcels 10-01-020, 021 and 027 (the Seward tracts) are accessible solely from a gated hunt club access road on Route 626. A group of solar panels is proposed on Pons Road (Route 625) adjacent to the Surry County line. Agricultural, forestal, and dispersed single-family residential uses occur throughout the project area. The area is sparsely populated but features a relatively high concentration of historic structures described in depth in the enclosed Phase 1 Architectural Resource Survey, including the Carroll Plantation, (Abraham) Jones House, and Gale (Burwell Person) House. Significant areas of wetlands can be found adjacent to Pouches Swamp and on recently logged silvicultural lands.

On February 3, 2021, the County Agricultural and Forestal District Advisory Committee considered the petition from owners of the subject properties to

remove all or a portion of each of the six parcels located in the Moonlight Agricultural and Forestal District from the district. The committee subsequently voted to recommend approval of the petitioners request for withdrawal. The parcels subject to this request are Tax Parcels 10-01-020, 10-01-021, 10-01-023, 10-01-027, 11-01-005, and 11-01-015.

The Planning Commission held a public hearing on the application at their February 23, 2021 regular meeting. Following the hearing, the Planning Commission requested additional information from both staff and the applicant and postponed consideration of the item until the next regular meeting. An informational memo to address these requests was presented by staff to the Commission at the March 23, 2021, meeting and is attached for your information.

At the March 23, 2021, regular meeting, the Planning Commission forwarded a recommendation for approval of the conditional use permit subject to the conditions recommended by staff, except for one amendment to Condition Number 7 regarding construction hours. Specifically, the Commission recommended prohibiting construction activity on Sundays. The Commission also forwarded a recommendation to remove the subject parcels located in the Moonlight Agricultural/Forestal District from the district.

The Board of Supervisors conducted a public hearing on the application at its regular meeting on April 15, 2021. The Board posed a number of questions to the applicant about the project and solar farms generally and requested additional information. The Board subsequently postponed final action on the application until its next regular meeting on May 20, 2021 to allow the applicant sufficient time to fulfill the Board's request. Enclosed in the meeting packet are the applicant's responses to these questions and requests for additional information including extensive exhibits containing studies, reports, and related supporting documentation.

BUDGETARY IMPACT:

The budgetary impacts of the project are discussed in the Economic Impact Assessment (Appendix K of the Project Narrative) and staff memoranda included with this agenda item.

RECOMMENDATION:

The Planning Commission recommended approval of the application at its regular meeting on March 23, 2021, with the following conditions:

1. The subject properties shall be developed in general conformance with the approved site plan prepared by Kimley-Horn and Associates, Inc. dated February 2, 2021 for up to five hundred (500) total acres.
2. The portion of the subject properties supporting solar panels shall be enclosed by security fencing of a type which is harmonious with the rural, agricultural, and historical character of the County as determined by the Zoning Administrator upon approval of the site plan for the project.
3. The applicant shall preserve and maintain existing forest and vegetation within required setback areas and buffer yards and shall not clear or cut live trees within required setbacks or buffer yards without written authorization from the Zoning Administrator.
4. A continuous screening zone at least seventy-five (75) feet in width shall be established surrounding the project electrical substation. Existing live trees and vegetation shall be preserved within the screening zone, provided that breaks for required access, and for overhead and underground transmission lines, shall be permitted to interrupt the contiguousness of the zone with approval by the Zoning Administrator.
5. The applicant shall submit an Emergency Response Plan with the first submission of the site plan, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided, at the discretion of the County, to County emergency response staff with regards to safety for on-site emergency response. The applicant shall install a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise and include plans for the same on the project site plan.
6. The applicant shall conserve topsoil on the site to the maximum extent feasible. Topsoil stockpiled on the site shall be stored out of view from adjacent properties and public roads.
7. Hours of operation for construction activities shall be limited to 7:00 A.M. to 7:00 P.M. Monday through Friday and 9:00 A.M. to 7:00 P.M on Saturdays. No construction shall occur on Sundays.

Staff recommends approval of the conditional use permit for Cavalier Solar (CUP-3-19) subject to conditions as listed in the Planning Commission staff report.

ATTACHMENTS:

Description	Type	Upload Date
Applicant Responses to BOS Inquiries	Backup Material	5/4/2021
PC Staff Report	Backup Material	3/30/2021

PC Follow-Up Memo	Cover Memo	3/11/2021
Exhibits A & C: Recommended Conditions	Backup Material	3/31/2021
Exhibit B: Property Map	Backup Material	3/30/2021
Zoning Map	Backup Material	3/26/2021
Proposed Development Map	Backup Material	2/16/2021
Site Photos	Backup Material	2/17/2021
CUP Application and Narrative	Backup Material	2/17/2021
Archaeology Report	Backup Material	2/17/2021
Architectural Report	Backup Material	2/17/2021
AFD Committee Staff Rpt Feb 2021	Backup Material	2/17/2021
Cavalier ED Impacts Feb 2021	Backup Material	2/17/2021
Cavalier CUP BOS Ordinance 052021	Ordinance	5/10/2021

Cavalier Solar – CUP CUP-3-19

Isle of Wight Board of Supervisors Hearing – Questions/Comment Responses

1. How does this effect wildlife? Are there studies and does wildlife have places to go

AES has been conducting ongoing wildlife and sensitive habitat assessments at Cavalier Solar since 2017. These studies have evaluated the existing wildlife and habitat conditions of over 4,000 acres of land within the project area and in direct consultation with the Virginia Department of Game and Inland Fisheries, (VDGIF), now Department of Wildlife Resources (DWR), Virginia Department of Conservation and Recreation (VDCR), Virginia Department of Environmental Quality (VDEQ), and US Fish and Wildlife (USFWS). As documented within Kimley Horn's March 2, 2018 Preliminary Assessment of Threatened and Endangered Species Report, which was submitted by AES (formerly sPower) to and reviewed by all of the agencies previously mentioned, the Cavalier Solar project is located in an area that does support abundant and diverse wildlife, but it was determined through project specific field studies, that the solar project development and operation would not have any noticeable impact on any threatened or endangered species, including the Northern Long-Eared Bat and Bald Eagles; however, the habitat assessments conducted by AES did determine that there was a moderate potential for impacts to vernal pond features across the project area. The vernal pools have the potential to provide habitat for sensitive species, such as the Eastern tiger salamander and the barking tree frog. In direct coordination with VDEQ, DWR, VDCR, and USFWS, AES determined that these vernal pools would be left intact (undisturbed by AES associated development) and additional buffers of up to 300-ft would remain around the pools to ensure that the habitats are not disturbed. Additionally, AES is proposing to leave habitat corridors in place to provide unimpeded access for wildlife between the vernal pools and other sensitive habitat. Furthermore, AES is conducting the following measure to ensure that wildlife impacts in and around the project are mitigated as much as possible:

- Raised wildlife fencing – Fencing will be at a height such that deer will not be able to jump over the fence and be entrapped within the panel arrays AND fencing will contain periodic raised openings for transient wildlife passage (foxes, skunks, raccoons, etc)
- An invasive species management plan will be implemented to prevent spread of invasive species
- Planting of native pollinator plants in buffers and other areas
- Establishment of over 200 acres of wildlife conservation area
- Preservation of over 2,000 acres of previous farm/forested land from development or disturbance for 35 years

Also, please see **Exhibit A – DEQ Report** which provides a comprehensive review of the potential environmental impacts and the requirements imposed by various regulatory entities.

2 – What is the lighting plan?

Lighting will be minimized to reduce any impact to the surrounding area. Lights will be positioned at entrances, and at the collector substation on site. These lights will be facing toward the project and hooded to reduce light exposure outside of the site. The collector substation lighting will be behind the mandated visual buffer and internal to the project site. These lights will be motion activated, as to not be on throughout the night. Because the project will be behind fencing the chances of wildlife causing these lights to go on will be low, and even if they do go on, they will be positioned to reduce light seen from any

surrounding area. Since these projects do not operate at night, there will be no lighting within the panel arrays or around the site besides those located at entrances. The surrounding residences need not worry about light pollution that might impede the night sky or cause any disruption with lighting on the project site.

3- How much noise do these facilities typically produce?

The noise from the PV array will be negligible at the project fence line. Tracker motors operate so slowly that there is no constant or audible noise. Central inverters sometimes have some forced-air cooling fans but are located internally with sufficient distance from fence lines that they will not be heard. The loudest equipment associated with the project is the substation transformer. The transformer during daytime hours will produce 90 decibels of noise at the transformer. The transformer will be located approximately 2000 feet from the nearest property line, and the noise level measured at that distance is approximately 20 decibels (equivalent to the sound of rustling leaves) if no screening is present. When this distance is coupled with the screening that is planned for the substation, no detectable noise will be heard outside of the project property. Cavalier will be a quite, and unobtrusive neighbor.

Additionally, please note the excerpt below from Exhibit B - Solar Acoustic Levels that measured the noise that the panels and inverters make at various distances and concluded that, while solar panels do make some noise, that noise is negligible to begin with and becomes inaudible from between 50–100 feet of the facility boundary line. These setback distances are already proposed for Cavalier Solar which means the noise would not be audible to adjacent properties and the additional screening will further diminish the noise. Also, the noise that a solar facility produces only occurs when the equipment is in use. In other words, at night, when the panels and inverters are not producing energy, there's no noise.

> *Sound levels along the fenced boundary of the PV arrays were generally at background levels, though a faint inverter hum could be heard at some locations. Any sound from the PV array and equipment was inaudible at set back distances of 50 to 150 feet from the boundary. Average Leq sound levels at a distance of 10 feet from the inverter face varied over the range of 48 dBA to 61 dBA for Site 2 and Site 3 Inverters, and were higher in the range of 59 to 72 dBA for Site 1 Inverters. Along the axis perpendicular to the plane of the inverter face and at distances of 10 to 30 feet, sound levels were 4 to 13 dBA higher compared to levels at the same distance along the axis parallel to the inverter face. At 150 feet from the inverter pad, sound levels approached background levels. Sound level measurements generally followed the hemispherical wave spreading law (-6 dB per doubling of distance).*

Please see **Exhibit B - Solar Acoustic Levels** for an example study of noise from a solar facility.

4 – What will the screening requirements for the facility?

The Cavalier Solar project has a robust screening plan to reduce any visual impacts the project may have on the surrounding roads or properties. The plan conforms to all of the county ordinances and provides a full 120-point screening as required by Isle of Wight Solar Ordinance.

Additionally, as noted in the staff report, the following conditions were recommended by staff:

(3) The applicant shall preserve and maintain existing forest and vegetation within required setback areas and buffer yards and shall not clear or cut live trees within required setbacks or buffer yards without written authorization from the Zoning Administrator.
(4) A continuous screening zone at least 75 feet in width shall be established surrounding the project electrical substation. Existing live trees and vegetation shall be preserved within the screening zone, provided that breaks for required access, overhead and underground transmission lines, shall be permitted to interrupt the contiguousness of the zone with approval by the Zoning Administrator.

Also, please see **Exhibit C – Conceptual Site Plan** – pages 8-13 for a overview of the setbacks, screening requirements and a visual simulation of the screening.

5 – Who provides project oversight?

Cavalier Solar is committed to the responsible development and operation of a Solar Energy Facility within IOW County. The project has undergone rigorous review and scrutiny from several federal, state and local stakeholders, including the State Corporation Commission (SCC), VDEQ, VDCR, DWR, USFWS, and IOW/Surry County officials. Additionally, Cavalier Solar has heard the concerns of the local community and incorporated mitigation measures, such as project infrastructure setbacks from neighbors, vegetative buffer screening, and restrictions associated with construction road use, to ensure that the project provides minimal impact to the surrounding citizens and community. The project's approval to be built and operate is subject to numerous conditions from these stakeholders, including 16 specific construction and operation conditions established by IOW County officials within the Proposed CUP for the project. Cavalier Solar will be held accountable to these conditions, by the County and state agencies, and ultimately the citizens of the community. If the project is found to be out of compliance with these conditions, either by County/state officials, or by the citizens of IOW, then the project could face fines, corrective actions, and potentially be shutdown. As such, it is Cavalier Solar's mission to strive to always be in compliance with the construction and operational conditions for the project. If the project is found to be out of compliance with any condition, we will work internally and with the community to rectify the issue(s) immediately.

6 – Does the solar facility cause ground contamination?

Solar panels have been safely used around the world for over 30 years including on school buildings, hospitals and millions of homes. Simply put, there is no measurable risk of contamination from the panels or the steel support piles.

Please note the following excerpt in Exhibit D regarding lack of contamination from panels:

> *To provide decades of corrosion-free operation, PV cells in PV panels are encapsulated from air and moisture between two layers of plastic. The encapsulation layers are protected on the top with a layer of tempered glass and on the backside with a polymer sheet. Frameless modules include a protective layer of glass on the rear of the panel, which may also be tempered. The plastic ethylene-vinyl acetate (EVA) commonly provides the cell encapsulation. For decades, this same material has been used between layers of tempered glass to give car windshields and hurricane windows their great strength. In the same way that a car windshield cracks but stays intact, the EVA layers in PV panels keep broken panels intact (see Figure 4). Thus, a damaged*

module does not generally create small pieces of debris; instead, it largely remains together as one piece….
As indicated by their 20 to 30-year power warranty, PV modules are designed for a long service life, generally over 25 years. For a panel to comply with its 25-year power warranty, its internal components, including lead, must be sealed from any moisture. Otherwise, they would corrode and the panel's output would fall below power warranty levels…

Regarding zinc from the galvanized steel contaminating the soil, a literature review for that topic did not result in any studies or articles reviewing that phenomenon in relation to solar facilities or any other use of galvanize steel.

Please see **Exhibit D – Health and Safety Impacts of Photovoltaics** for additional information on the long standing safety record of solar facilities.

7 – Please explain the solar panel efficiency?

Cavalier Solar currently anticipates there will be three different modules on the Cavalier Project with the efficiencies listed below:

- 400W – 19.88%
- 405W – 20.13%
- 530W – 20.55%

8 - Are panels recyclable?

Yes. Studies show the value of the recovered materials can cover the expense of decommissioning and recycling making recycling of PV at the end of their useful life a profitable enterprise. Furthermore, studies of large-scale penetration of PV into global electricity grids show that recycling of PV modules is imperative for maintaining a secondary source of materials.

End-of-life disposal of solar products in the US is governed by the Federal Resource Conservation and Recovery Act (RCRA), and state policies that govern waste. Panels removed from the site will be recycled according to the means, methods, and regulations at the time of decommissioning. Presently, there are numerous companies that recycle solar panels including First Solar, Dynamic Life Cycle Innovations, Cleanlites Recycling, and Clean Harbors.

It is also worth noting that the panels pass the Environmental Protection Agency (EPA) Toxicity Characterization Leachate Profile (TCLP), which characterizes the leaching potential of metals in landfills. This means, should panel recycling options be unavailable in the future for whatever reason, traditional, non-hazardous landfills would be an option for disposal.

9. Provide a summary of the broadband proposal and how it would help the surrounding community with access to broadband.

Cavalier Solar is seeking to provide a grant of up to $200,000 to Ruralband to expand and speed up the deployment in the vicinity of the Cavalier Solar project which is located in Surry and Isle of Wight County. The initial area we are targeting is shown below outlined in red and we believe this area could

expand as discussion progress. Ruralband estimates at least 100 households would be impacted and have access to broadband much sooner than currently expected.

Please see **Exhibit E - Isle of Wight Broadband Expansion** for a full review of the communications with Ruralband.

On May 3rd, Cavalier Solar, Ruralband and Isle of Wight personnel had a conference call to discuss next steps. Ruralband is formulating the project outline and impact and reviewing the connection potential in the project area. Ruralband and Isle of Wight also indicated that they would likely pursue federal/state matching funds to further enhance the broadband deployment in the area. If the Cavalier Solar CUP is approved Cavalier Solar will enter into an agreement to fund at least $200,000 towards this goal.

10 – Provide a list of the donations made in Surry and Isle of Wight County:

Please see table below of the recipients, date, amounts and target of donation. Most of the donations were related to COVID relief.

Entity	Date	Amount	Towards
Surry Historical Society	September 2019	$ 5,000.00	Fundraising
First Baptist Church - Spring Grove, VA	April 2020	$ 2,000.00	COVID - Mask Making
Surry County Sheriffs Office	April 2020	$ 2,000.00	Fundraising - National Night Out
Isle of Wight Volunteer Rescue	April 2020	n/a	COVID - retracted once determined PC Chair Brian Carroll worked at entity
Rushmere Community Development Corp.	August 2020	$ 3,000.00	COVID - Education
Virginia Diner	May/Sept 2020	$ 10,280.00	COVID - Meals for Seniors
Isle of Wight Chamber of Commerce	September 2020	$ 500.00	COVID – Small Business Gift Cards
Surry County Public School students and residents	September 2020	$ 13,114.00	COVID - Education - Wifi hotspots

Surry County Economic Development Authority	September 2020	$ 5,000.00	COVID Small Business Grants
Crater Regional Workforce	September 2020	$ 5,000.00	COVID Small Business Grants

11 – Provide a Decommissioning Plan and Cost Estimate for the project.

As required by the IOW solar ordinance, the project will submit a decommissioning plan and estimate as a part of the site plan approval process. Additionally, see Exhibit F which includes an example decommissioning plan and estimate that is based off our 500MW Spotsylvania Solar facility. Also, included is a prorated estimate for the portion included in Isle of Wight which comes in at $5.5 Million without salvage value and positive $3 million with salvage value.

The Decommissioning Plan and Estimate would be customized by a professional engineer for Cavalier Solar based on final site design and details and submitted during the site plan approval process.

Please see attached **Exhibit F - Cavalier Solar Draft Decommissioning Plan and Cost Estimate**.

Exhibit A

DEQ Report

Virginia State Corporation Commission
eFiling CASE Document Cover Sheet

20122906001

Case Number (if already assigned)	PUR-2020-00235
Case Name (if known)	Cavalier Solar A, LLC, 240 MW Solar Generating Facility Project
Document Type	CMMT
Document Description Summary	Commonwealth of Virginia's review of PUR-2020-00235 Cavalier Solar A.
Total Number of Pages	55
Submission ID	20496
eFiling Date Stamp	12/9/2020 10:22:53AM

20120081

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 1111 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

December 9, 2020

Mr. Joel H. Peck, Clerk
State Corporation Commission
Document Control Center
Tyler Building-First Floor
1300 E. Main Street
Richmond, Virginia 23219

RE: Cavalier Solar A, LLC, 240 MWac Solar Generating Facility Project, Isle of Wight and Surry Counties, State Corporation Commission, Case No. PUR-2020-00235 (DEQ# 20-141S)

Dear Mr. Peck:

As requested in Ms. Alisson Klaiber's letter of October 8, 2020, the Department of Environmental Quality (DEQ) has coordinated the review of the above-referenced application, focusing on the environmental information found in Exhibit G: Environmental Assessment. The purpose of the review is to develop information for State Corporation Commission (SCC) staff about potential impacts to natural and cultural resources associated with the proposed project. Based on comments submitted by reviewers, we are providing a summary of potential impacts to these resources from construction and operation of the solar facility, as well as recommendations for minimizing those impacts and for compliance with applicable legal requirements. This report includes copies of the comments submitted by reviewers.

Thank you for the opportunity to review the application for SCC certification. We trust that you will find our report helpful in your review process. If you have any questions, please feel free to call me at (804) 698-4204 or John Fisher at (804) 698-4339.

Sincerely,

Bettina Rayfield, Program Manager
Environmental Impact Review and Long-Range Priorities

20122801

Attachments

Ec: Robbie Rhur, DCR
Amy Ewing, DWR
Keith Tignor, VDACS
Tiffany Birge, VMRC
Arlen Fields Warren, VDH
Roger Kirchen, DHR
Mike Hallock-Solomon, VOF
Heather Williams, VDOT
Terry Lasher, DOF
Amy Ring, Isle of Wight County
Jonathan Lynn, Surry County
Dennis Morris, CPDC
Ben McFarlane, HRPDC
Alisson Klaiber, SCC

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

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2612200001

COMMENTS OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY concerning the Application of Cavalier Solar A, LLC for a Certificate of Public Convenience and Necessity for the 240 MWac Solar Generating Facility Project in Isle of Wight and Surry Counties, State Corporation Commission Case No. PUR-2020-00235 (DEQ# 20-141S).

The following comments are intended to provide technical assistance to the State Corporation Commission in evaluating the project. The following agencies and planning district commission joined in this review:

Department of Environmental Quality
Department of Wildlife Resources
Department of Conservation and Recreation
Marine Resources Commission
Department of Health
Virginia Outdoors Foundation
Crater Planning District Commission

In addition, the Department of Agriculture and Consumer Services, Department of Historic Resources, Department of Forestry, Department of Transportation, Isle of Wight County, Surry County, and the Hampton Roads Planning District Commission were invited to comment on the proposal.

The information considered in this review includes the *Application of Cavalier Solar A, LLC, For Certificates of Public Convenience and Necessity for a Solar Generating Facility Totaling Up to 240 MWac and Associated Interconnection Facilities to be Located in Surry County and Isle of Wight County, Virginia, Case No. PUR-2020-00235,* focusing on *Exhibit G: Environmental Assessment.*

PROJECT DESCRIPTION

Cavalier Solar A, LLC (Cavalier or Applicant) has submitted an application to the State Corporation Commission (SCC) for a Certificate of Public Convenience and Necessity to construct and operate a solar generating facility made up of approximately 634,000 solar photovoltaic modules with a capacity of up to 240 MW (the Project). The Project will be constructed on approximately 1,776 acres in southern Surry County and northern

2612681

Isle of Wight County, Virginia. The proposed area for development of the Project currently is rural, cropland, cleared forest and timber land generally bounded by White Marsh Road to the north, Beechland Road to the west, and Mill Swamp Road to the south.

The Project will utilize solar photovoltaic (PV) modules mounted on racking systems supported by a pile-driven foundation design. The racking configuration is expected to be a single-axis tracking configuration with north-south trending rows that will track the sun from east to west over the course of the day. The modules will be electrically connected into strings that will be connected to combiner boxes located throughout the solar generating facility. The output power cables from the combiner boxes will be consolidated and feed the direct current (DC) electricity to inverters which convert the DC to alternating current (AC). Each inverter will be fully enclosed, pad mounted, and stand approximately 95 inches in height. The AC output from the inverters will be routed through an AC collection system and consolidated within the system switchgear. The final output from the solar generating facility will be processed through a step-up transformer to match the interconnection voltage. An approximately two-mile, 34.5 kV medium voltage feeder line would be constructed through the middle of the site to the Project Substation in Isle of Wight County, and an approximately 0.35 mile, 500 kV generation-tie line would be constructed from the Project Substation to the Septa Substation.

The Project will be designed with a comprehensive Supervisory Control and Data Acquisition (SCADA) system for remote monitoring of facility operations and/or remote control of critical components. Within the Site, the fiber optic or other cabling required for the monitoring system will be installed throughout the solar generating facility leading to centrally located (or series of appropriately located) SCADA system cabinets. The telecommunications connections to the SCADA system cabinets may be wireless or hard wired.

The Project will include a meteorological (met) data collection system. The met station will have the following weather sensors; a pyranometer for measuring solar irradiance, a thermometer for measuring air temperature, a barometric pressure sensor to measure atmospheric pressure, and two wind sensors to measure speed and direction. These sensors will be connected to a data logger to compile the data for transmission to the Data Collection Center.

All energy will be routed to the Project switchgear, located adjacent to the Project Substation, where all energy from the Project will be stepped up to 230 kV. The primary switchgear includes the main circuit breaker and utility metering equipment, and would be enclosed separately and pad mounted together with the generator step-up (GSU) transformer. Both the GSU and the primary switchgear stand approximately 8 feet in height with conductors that increase the total height to approximately 27 feet in height. Lighting masts for security will stand approximately 65 feet in height.

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An operations and maintenance facility may be located on-site to store maintenance equipment and vehicles, safety equipment, replacement components, and other items deemed necessary for Project operations.

There is potential for the Project to include an intelligent battery system at the Site for energy storage. To the extent that the Applicant would elect to move forward with a storage option, the Applicant would seek separate Commission approvals (or supplement then existing approvals).

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LIST OF PERMITS OR APPROVALS

The following permits and approvals are likely to be necessary as prerequisites to project construction. The details of these requirements appear in the "Regulatory and Coordination Needs" section of these comments.

1. **Water Permits (see "Regulatory and Coordination Needs," item 1, page 27).**

   a. Virginia Water Protection (VWP) Permit (9 VAC 25-210 *et seq.*). Issued by the Department of Environmental Quality (DEQ) for impacts to waters and jurisdictional wetlands, including isolated wetlands.

2. **Subaqueous Lands Management (see "Regulatory and Coordination Needs," item 2, page 27).**

   a. Subaqueous Lands Permit pursuant to Section 28.2-1204 of the Code of Virginia. Issued by the Virginia Marine Resources Commission for encroachments in, on or over state-owned subaqueous beds.

3. **Erosion and Sediment Control and Stormwater Management Plans (see "Regulatory and Coordination Needs," item 3(a), page 27).**

   a. Erosion and sediment control plans under § 62.1-44.15:61 and 9 VAC 25-840-30 *et seq.* for the construction of facilities are subject to approval by the local plan approving authority.
   b. Local approval of stormwater management plans under § 62.1-44.15:31 and 9 VAC 25-870-210 *et seq.*

4. **Stormwater Management Permit (see "Regulatory and Coordination Needs," item 3(b), page 27).**

   a. Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880-70 et *seq.*) of the Virginia Stormwater Management Program Permit Regulations (9 VAC 25-870 *et seq.)* involving land disturbance of one acre or more. Coverage under this general permit is approved by the locality.

5. **Floodplain Management (see "Regulatory and Coordination Needs," item 4, page 27).**

   a. All development within a Special Flood Hazard Area (SFHA) or floodplain, as shown on a locality's Flood Insurance Rate Map, must be permitted and comply with the requirements of the local floodplain ordinance pursuant to 44 CFR 59.2(b).

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6. Air Quality Permits or Approvals (see "Regulatory and Coordination Needs," item 5, pages 27 and 28).

a. Open Burning Permit (9 VAC5-130 *et seq.*). For open burning involving vegetative and construction debris.
b. Fugitive dust emissions (9 VAC5-50-60 *et seq.*). Governs abatement of visible emissions.

7. Solid and Hazardous Waste Management (see "Regulatory and Coordination Needs," item 6, page 28).

a. Applicable state laws and regulations include:
   - Virginia Waste Management Act (Code of Virginia Section 10.1-1400 *et seq.*);
   - Virginia Hazardous Waste Management Regulations (VHWMR) (9 VAC 20-60 *et seq.*);
   - Virginia Solid Waste Management Regulations (VSWMR) (9 VAC 20-81); and
   - Virginia Regulations for the Transportation of Hazardous Materials (9 VAC 20-110).

b. Applicable Federal laws and regulations include:
   - Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and
   - U.S. Department of Transportation Rules for Transportation of Hazardous materials (49 CFR Part 107).

8. Historic Preservation (see "Regulatory and Coordination Needs," item 10, page 29).

a. Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation 36 CFR 800 requires that federally licensed and permitted projects consider its effects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 applies if there is federal involvement such as the issuance of a Section 404 Clean Water Act permit, including Nationwide Permits. The applicability of Section 106 to the entire project or any portion thereof must be determined by the responsible federal agency.

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SUMMARY OF RECOMMENDATIONS

Based on the information and analysis submitted by reviewing agencies, we have several recommendations for consideration by the SCC in its deliberations on the approval and certification of solar generation facilities. These recommendations are in addition to requirements of federal, state or local law or regulations listed above. The rationale for these recommendations is discussed in the remainder of these comments, specifically in the "Environmental Impacts and Mitigation" section. If the SCC decides to grant the CPCN, irrespective of the alternative selected, we offer the following recommendations which are not listed in any order of priority.

- Follow DEQ recommendations including the avoidance and minimization of impacts to wetlands and streams (Environmental Impacts and Mitigation, item 1(c), pages 8 and 9).

- Take all reasonable precautions to limit emissions of oxides of nitrogen and volatile organic compounds, principally by controlling or limiting the burning of fossil fuels (Environmental Impacts and Mitigation, item 6(d), page 14).

- Evaluate identified Pollution Complaint case and its potential to impact the proposed project (Environmental Impacts and Mitigation, item 7(d)(*i*), page 16).

- Reduce solid waste at the source, reuse it and recycle it to the maximum extent practicable, and follow DEQ's recommendations to manage waste, as applicable, (Environmental Impacts and Mitigation, item 7(d)(*ii*), page 16).

- Coordinate with the Department of Conservation and Recreation on the development of an inventory for natural heritage resources related to coastal plain depression swamps and bogs (Environmental Impacts and Mitigation, item 8(c)*(iv)*, page 20).

- Development of an invasive species management plan and the planting of native pollinator plants may be coordinated with the Department of Conservation and Recreation (Environmental Impacts and Mitigation, item 8(c) *(iii)*, page 19).

- Coordinate with the Department of Conservation and Recreation on a plan to minimize the fragmentation of ecological cores (Environmental Impacts and Mitigation, item 8(c)*(iv)*, page 20).

- Coordinate with the Department of Conservation and Recreation for updates to the Biotics Data System database (if the scope of the project changes or six months passes before the project is implemented) (Environmental Impacts and Mitigation, item 8(c)*(v)*, page 20).

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- Coordinate with the Department of Wildlife Resources on measures to enhance the passage of wildlife (Environmental Impacts and Mitigation, item 9(c)*(i)*, page 21 and 22).

- Coordinate with the Department of Wildlife Resources to evaluate available information on the "lake effect' of solar facilities and post-construction monitoring (Environmental Impacts and Mitigation, item 9(c)*(ii)*, page 22).

- Coordinate with the Department of Wildlife Resources on post-construction monitoring and the sharing of meteorological (met) data related to the potential thermal-island effect (Environmental Impacts and Mitigation, item 9(c)*(iii)*, page 22).

- The preparation and implementation of a plan using a native plant seed mix for ground cover may be coordinated with the Department of Wildlife Resources (Environmental Impacts and Mitigation, item 9(c)*(v)*, page 22).

- Coordinate with the Virginia Outdoors Foundation should the project change or if construction does not begin within 24 months of this response (Environmental Impacts and Mitigation, item 10(c), page 23).

- Employ best management practices (BMPs) and Spill Prevention and Control Countermeasures as appropriate for the protection of water supply sources (Environmental Impacts and Mitigation, item 12(d), page 24).

- Follow the principles and practices of pollution prevention to the extent practicable (Environmental Impacts and Mitigation, item 14(a), page 25).

- Limit the use of pesticides and herbicides to the extent practicable (Environmental Impacts and Mitigation, item 15, page 26).

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ENVIRONMENTAL IMPACTS AND MITIGATION

1. Water Quality and Wetlands. The EA (C. Wetlands and Waters of the United States, page 9) states that potential impacts to wetlands would include conduit and road crossings for construction and maintenance vehicles. The amount of impacts will not be known until final design of the Project has been completed, and a final wetlands delineation report has been prepared and accepted by the U.S. Army Corps of Engineers (Corps). The Applicant will likely seek a Nationwide Permit for utility line and/or road crossings; Section 401 Clean Water Act certification from DEQ will be part of this permit.

1(a) Agency Jurisdiction. The State Water Control Board promulgates Virginia's water regulations covering a variety of permits to include the Virginia Pollutant Discharge Elimination System Permit regulating point source discharges to surface waters, Virginia Pollution Abatement Permit regulating sewage sludge, storage and land application of biosolids, industrial wastes (sludge and wastewater), municipal wastewater, and animal wastes, the Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection (VWP) Permit regulating impacts to streams, wetlands, and other surface waters. The VWP permit is a state permit which governs wetlands, surface water, and surface water withdrawals and impoundments. It also serves as §401 certification of the federal Clean Water Act §404 permits for dredge and fill activities in waters of the U.S. The VWP Permit Program is under the Office of Wetlands and Stream Protection, within the DEQ Division of Water Permitting. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities:

- Clean Water Act, §401;
- Section 404(b)(i) Guidelines Mitigation Memorandum of Agreement (2/90);
- State Water Control Law, Virginia Code section 62.1-44.15:20 *et seq.*; and
- State Water Control *Regulations*, 9 VAC 25-210-10.

1(b) Agency Findings. The DEQ Office of Wetlands and Stream Protection (OWSP) finds that it is unable to determine the potential impacts to wetlands and streams based on the information provided in the EA. However, the proposed Project may require VWP individual permit or general permit coverage.

1(c) Agency Recommendations. DEQ-OWSP offers the following general recommendations concerning potential surface water impacts:

1. Wetland and stream impacts, including any secondary impacts, should be avoided and minimized to the maximum extent practicable.
2. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the Corps.

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3. At a minimum, any required compensation for impacts to State Waters, including the compensation for permanent conversion of forested wetlands to emergent wetlands, should be in accordance with all applicable state regulations and laws. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed.
4. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
5. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. Furthermore the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.
6. Erosion and sedimentation controls should be designed in accordance with the *Virginia Erosion and Sediment Control Handbook, Third Edition, 1992*. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the *Virginia Erosion and Sediment Control Handbook, Third Edition, 1992*.
7. No machinery may enter surface waters, unless authorized by a VWP individual permit, general permit, or general permit coverage.
8. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
9. Activities should be conducted in accordance with any Time-of-Year restriction(s) as recommended by the Department of Wildlife Resources, the Department of Conservation and Recreation, or the Virginia Marine Resources Commission. The permittee should retain a copy of the agency correspondence concerning the Time-of-Year restriction(s), or the lack thereof, for the duration of the construction phase of the Project.
10. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a VWP individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete should be prohibited from entering surface waters.
11. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the U.S. Fish and Wildlife Service. These herbicides should be applied according to label directions by a licensed herbicide applicator. A non-petroleum based surfactant should be used in or around any surface waters.

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1(d) Requirements. If a permit is necessary, the Applicant may submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ. The appropriate DEQ Regional Office will make the final permitting decisions.

For questions or additional information regarding these comments, contact DEQ-OWSP, Michelle Henicheck at (804) 698-4007 or michelle.henicheck@deq.virginia.gov.

2. Subaqueous Lands Impacts. According to the EA (C. Wetlands and Waters of the United States, page 9), field investigation and delineations of will be performed to identify wetlands and Waters of the United States (WOUS). Potential impacts would include conduit and road crossings for construction and maintenance vehicles.

2(a) Agency Jurisdiction. The Virginia Marine Resources Commission (VMRC) regulates encroachments in, on or over state-owned subaqueous beds as well as tidal wetlands pursuant to Virginia Code §28.2-1200 through 1400. For nontidal waterways, VMRC states that it has been the policy of the Habitat Management Division to exert jurisdiction only over the beds of perennial streams where the upstream drainage area is 5 square miles or greater. The beds of such waterways are considered public below the ordinary high water line.

2(b) Agency Findings. VMRC finds that the proposed Project may require a permit for any impacts to state subaqueous lands. All jurisdictional impacts will be reviewed by the VMRC during the JPA process. Any permit issued by VMRC will specify necessary special conditions for the project.

2(c) Requirements. The Applicant must submit a JPA to VMRC which serves as the clearinghouse for permit reviews for impacts to jurisdictional waters under the authority of VMRC, DEQ, Corps and local wetlands boards.

3. Erosion and Sediment Control and Stormwater Management. According to the EA (F. Erosion and Sediment Control, page 13), all requirements for stormwater management will be complied with as required by Surry County, Isle of Wight County, and DEQ, including implementation of an Erosion and Sediment Control Plan and a Stormwater Pollution Prevention Plan.

3(a) Agency Jurisdiction. The DEQ Office of Stormwater Management (OSWM) administers the following laws and regulations governing construction activities:

- Virginia Erosion and Sediment Control (ECS) Law (§ 62.1-44.15:51 *et seq.*) and Regulations (9 VAC 25-840);
- Virginia Stormwater Management Act (§ 62.1-44.15:24 *et seq.*);
- Virginia Stormwater Management Program (VSMP) regulation (9 VAC 25-870); and
- 2014 General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880).

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In addition, DEQ is responsible for the VSMP General Permit for Stormwater Discharges from Construction Activities related to Municipal Separate Storm Sewer Systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program (9 VAC 25-890-40).

3(b) Requirements.

(i) Erosion and Sediment Control Plan

The Applicant is responsible for submitting a project-specific erosion and sediment control (ESC) plan to the counties of Isle of Wight and Surry for review and approval pursuant to the local ESC requirements for projects involving a land-disturbing activity equal to or greater than 10,000 square feet or more (2,500 square feet or more in a Chesapeake Bay Preservation Area). Depending on local requirements, the area of land disturbance requiring an ESC plan may be less. The ESC plan must be approved prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project, must be covered by the project specific ESC plan. Local ESC program requirements must be requested through the localities. [Reference: Virginia Erosion and Sediment Control Law §62.1-44.15 *et seq.*; *Virginia Erosion and Sediment Control Regulations* 9 VAC 25-840-30 *et seq.*].

(ii) Stormwater Management Plan

Depending on local requirements, a Stormwater Management (SWM) plan may be required. Local SWM program requirements must be requested through the counties of Isle of Wight and Surry. [Reference: Virginia Stormwater Management Act §62.1-44.15 *et seq.*; *Virginia Stormwater Management (VSMP) Permit Regulations* 9 VAC 25-870-54 *et seq.*]

(iii) General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

The operator or owner of a construction project involving land-disturbing activities equal to or greater than one acre is required to register for coverage under the VAR10 permit and develop a project-specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit, and it must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available on Construction General Permit webpage. [Reference: Virginia Stormwater Management *Act* 62.1-§44.15 *et seq.*] *VSMP Permit Regulations* 9 VAC 25-870-10 *et seq.*].

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4. Chesapeake Bay Preservation Areas. The EA does not discuss potential Project impacts to Chesapeake Bay Preservation Areas.

4(a) Agency Jurisdiction. The DEQ Office of Watersheds and Local Government Assistance Programs (OWLGAP) administers the Chesapeake Bay Preservation Act (Bay Act) (Virginia Code §62.1-44.15:67 *et seq.*) and *Chesapeake Bay Preservation Area Designation and Management Regulations* (*Regulations*) (9 VAC 25-830-10 *et seq.*). Each Tidewater locality must adopt a program based on the Bay Act and *Regulations*. The Act and *Regulations* recognize local government responsibility for land use decisions and are designed to establish a framework for compliance without dictating precisely what local programs must look like. Local governments have flexibility to develop water quality preservation programs that reflect unique local characteristics and embody other community goals. Such flexibility also facilitates innovative and creative approaches in achieving program objectives. The regulations address nonpoint source pollution by identifying and protecting certain lands called Chesapeake Bay Preservation Areas (CBPAs). The regulations use a resource-based approach that recognizes differences between various land forms and treats them differently.

4(b) Agency Findings. DEQ-OWLGAP reviewed both the Isle of Wight County and Surry County online mapping programs and determined that the Project site lies outside of any locally designated CBPAs. Therefore, the Project is not subject to the *Regulations*.

For additional information, contact DEQ-OWLGAP, Amber Foster at (804) 698-4086 or amber.foster@deq.virginia.gov.

5. Floodplain Management. The EA does not discuss potential Project impacts on floodplains.

5(a) Agency Jurisdiction. The DCR Division of Dam Safety and Floodplain Management (DSFM) is the lead coordinating agency for the Commonwealth's floodplain management program and the National Flood Insurance Program. Pursuant to §10.1-603 of the Virginia Code and in accordance with 44 CFR section 60.12 of the National Flood Insurance Program Regulations for Floodplain Management and Flood Hazard Identification, all construction or land-disturbing activities in floodplains shall be submitted to the locality and comply with the locally adopted floodplain management ordinance.

5(b) National Flood Insurance Program. According to the DCR Floodplain Management Program staff, the National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive

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requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

5(c) Requirements. All development within a Special Flood Hazard Area (SFHA) or floodplain, as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must contact the local floodplain administrator for an official floodplain determination and, if the project is located in the SFHA, comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality.

5(d) Program Guidance. Flood zone information may be found on the Virginia Flood Risk Information System (VFRIS). For additional information regarding these comments, contact DCR-DSFM, Kristin Owen at (804) 786-2886 or kristin.owen@dcr.virginia.gov.

6. Air Quality. The EA (A. Air Emissions, page 8) states that the Project is a solar facility and will not emit any pollutants during operation. The Project does not require any air permits, would not emit pollutants during operation, and does not need emissions offsets or allowances.

6(a) Agency Jurisdiction. The DEQ Air Division, on behalf of the State Air Pollution Control Board, is responsible for developing regulations that implement Virginia's Air Pollution Control Law (Virginia Code §10.1-1300 *et seq.*). DEQ is charged with carrying out mandates of the state law and related regulations as well as Virginia's federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate DEQ regional office is directly responsible for the issuance of necessary permits to construct and operate all stationary sources in the region as well as monitoring emissions from these sources for compliance. The Air Division regulates emissions of air pollutants from industries and facilities and implements programs designed to ensure that Virginia meets national air quality standards. The most common regulations associated with major State projects are:

- Open burning: 9 VAC 5-130 *et seq.*
- Fugitive dust control: 9 VAC 5-50-60 *et seq.*
- Permits for fuel-burning equipment: 9 VAC 5-80-1100 *et seq.*

6(b) Agency Findings. The DEQ Air Division finds that the project is located within an ozone attainment area.

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6(c) Requirements.

(i) Fugitive Dust

During construction, fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *et seq.* of the *Regulations for the Control and Abatement of Air Pollution*. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(ii) Open Burning

If project activities include the open burning or use of special incineration devices for the disposal of land clearing debris, this activity must meet the requirements of 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100 of the *Regulations* for open burning, and it may require a permit. The *Regulations* provide for, but do not require, the local adoption of a model ordinance concerning open burning. Cavalier should contact the appropriate local officials to determine what local requirements, if any, exist. Some applicable provisions of the regulation include, but are not limited to:

- All reasonable effort shall be made to minimize the amount of material burned, with the number and size of the debris piles;
- The material to be burned shall consist of clean burning demolition material;
- The burning shall be at least 500 feet from any occupied building unless the occupants have given prior permission, other than a building located on the property on which the burning is conducted;
- The burning shall be conducted at the greatest distance practicable from highways and air fields;
- The burning shall be attended at all times and conducted to ensure the best possible combustion with a minimum of smoke being produced;
- The burning shall not be allowed to smolder beyond the minimum period of time necessary for the destruction of the materials; and
- The burning shall be conducted only when the prevailing winds are away from any city, town or built-up area.

6(d) Recommendation. Cavalier should take all reasonable precautions to limit emissions of oxides of nitrogen (NO_x) and volatile organic compounds (VOCs), principally by controlling or limiting the burning of fossil fuels.

7. Solid and Hazardous Waste Management. According to the EA (D. Impact of Solid and Hazardous Waste on Water Resources, pages 9 and 10), potential impacts to local

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water resources from solid and hazardous wastes, while not anticipated, have potential to occur during construction of the Project. Construction waste mostly consists of recyclable materials such as cardboard, steel, and electrical wiring. Waste and recycled materials will be separated and stored in large containers at the Site, and then hauled to an off-site facility for recycling and proper disposal. The use, storage, and disposal of hazardous materials and wastes would be governed according to regulations established by the Occupational Safety and Health Administration (OSHA) and DEQ.

7(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization (DEQ-DLPR) is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 *et seq.*), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund. DEQ-DLPR also administers laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 *et seq.*), including Aboveground Storage Tanks (9 VAC 25-91 *et seq.*) and Underground Storage Tanks (9 VAC 25-580 *et seq.* and 9 VAC 25-580-370 *et seq.*), also known as 'Virginia Tank Regulations', and § 62.1-44.34:14 *et seq.* which covers oil spills.

Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 *et seq.*
- *Virginia Solid Waste Management Regulations*, 9 VAC 20-81 (9 VAC 20-81-620 applies to asbestos-containing materials)
- *Virginia Hazardous Waste Management Regulations*, 9 VAC 20-60 (9 VAC 20-60-261 applies to lead-based paints)
- *Virginia Regulations for the Transportation of Hazardous Materials*, 9 VAC 20-110.

Federal:

- Resource Conservation and Recovery Act, 42 U.S. Code sections 6901 *et seq.*
- U.S. Department of Transportation *Rules for Transportation of Hazardous Materials*, 49 *Code of Federal Regulations*, Part 107
- Applicable rules contained in Title 40, *Code of Federal Regulations.*

7(b) Agency Findings. DEQ-DLPR conducted a search of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity (500-foot radius) to the Project area. The search identified one petroleum release site which might impact the Project.

> PC Number 19992319, SEPTA Substation, Route 626 NW of Route 627 and Route 681, Smithfield, Virginia 23430, Release Date: 11/15/2004, Status: Closed.

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7(c) Requirements.

(i) Waste Management

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. Hazardous material should be handled according to the hazardous waste regulations. It is the generator's responsibility to determine if a solid waste meets the criteria of a hazardous waste and managed appropriately.

(ii) Petroleum Contamination

If evidence of a petroleum release is discovered during implementation of the Project, it must be reported to DEQ, as authorized by Virginia Code § 62.1-44.34.8 through 19 and 9 VAC 25-580-10 *et seq*. Petroleum contaminated soils and groundwater generated during implementation of this project must be characterized and disposed of properly.

7(d) Recommendations.

(i) Pollution Complaint Case

The identified Pollution Complaint (PC) case should be further evaluated by the Applicant to establish the exact location, nature and extent of the petroleum release and the potential to impact the Project. Contact the DEQ-TRO Tanks Program at (757) 518-2000, for further information about the PC case.

(ii) Pollution Prevention

DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. Minimize the generation of hazardous wastes and handle it appropriately.

8. Natural Heritage Resources. According to the EA (E. Threatened and Endangered Species, pages 10-12), the Applicant reviewed the Department of Conservation and Recreation's (DCR) Natural Heritage Data Explorer database for the presence of natural heritage resources. Three Conservation Sites and a Stream Conservation Unit were identified within two miles of the Project site. Twenty to thirty possible Coastal Plain Depression Swamps and Ponds were identified within the Project site by DCR. The Applicant will implement erosion and sediment control measures during construction to further prevent potential impacts to the vernal pools and perform any required field surveys to determine presences at any wetland impact locations.

8(a) Agency Jurisdiction.

(i) The Virginia Department of Conservation and Recreation (DCR) Division of Natural Heritage (DNH).

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DCR-DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorizes DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

(ii) The Virginia Department of Agriculture and Consumer Services (VDACS).

The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

8(b) Agency Findings.

(i) Conservation Sites

According to the information currently in DCR files, the Clontz Place Conservation Site and the Shrub Pocosin Powerline East Conservation Site are located within the Project site. Both sites have been given a biodiversity significance ranking of B5, which represents a site of general biodiversity significance. The natural heritage resource of concern at these sites is:

Corynorhinus rafinesquii macrotis	Eastern big-eared bat	G3G4T3/S2/NL/LE

These bats roost singly or in small groups in hollow trees or abandoned buildings. Threats to this species include forest destruction, particularly hollow tree removal, decreasing availability of abandoned buildings, and possibly, insecticides. This species is currently classified as endangered by the Virginia Department of Wildlife Resources. See DCR-DNH comments attached for additional information.

(ii) Pouches Creek Stream Conservation Unit

DCR-DNH finds that the Pouches Creek Stream Conservation Unit is located within the project site. The Pouches Creek SCU has been given a biodiversity ranking of B4, which represents a site of moderate significance. The natural heritage resource associated with this site is:

Aquatic Natural Community (SC-Blackwater Second Order Stream) G3/S3/NL/NL

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Threats to the significant Aquatic Natural Community and the surrounding watershed include water quality degradation related to point and non-point pollution, water withdrawal and introduction of non-native species. See DCR-DNH comments attached for additional information.

(iii) Coastal Plain Depression Swamps and Ponds

DCR-DNH finds that a Coastal Plain Depression Swamps and Ponds (G2/SNR/NL/NL) natural community has been documented within the parcel north of Route 621 in Belle Meadow Pocosin. In addition, a DCR biologist concurs that many vernal pools/ephemeral ponds are in the Project area including 20-30 possible ponds within the project site.

Coastal Plain depression swamps and ponds are relatively rare, smallpatch communities that provide important habitat for the state-listed rare chicken turtle (*Deirochelys reticularia*) and three state-listed amphibians: Mabee's salamander (*Ambystoma mabeei*, G4/S1S2/NL/LT), Tiger salamander (*Ambystoma tigrinum*, G5/S1/NL/LE), and Barking tree frog (*Hyla gratiosa*, G5/S1/NL/LT). In addition, the globally rare plants, Harper's fimbry (*Fimbristylis perpusilla*, G2/S1/SOC/LE) and Pondspice (*Litsea aestivalis*, G3/S1/NL/NL) are confined to these habitats in Virginia.

According to DCR biologists and predicted suitable habitat modeling, there is potential for Mabee's salamander, Tiger salamander, Barking treefrog, Oak toad *(Anaxyrus quercicus*, G5/S2/NL/NL), rare natural communities (such as seasonal ponds), many rare plants, and additional populations of Eastern big-eared bat to occur in the project area if suitable habitat exists on site. See DCR-DNH comments attached for additional information.

(iv) Core Fragmentation

DCR-DNH finds that the proposed project will fragment C3, C4, and C5 cores as identified in the Virginia ConservationVision. The Virginia ConservationVision is a GIS analysis for identifying and prioritizing conservation lands in Virginia. Cores are areas of unfragmented natural cover with at least 100 acres of interior condition and provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Fragmentation occurs when a large, contiguous ecosystem is transformed into one or more smaller patches surrounded by disturbed areas resulting from the conversion and development. See detailed DCR comments attached for additional information on cores.

(v) Threatened and Endangered Plant and Insect Species

DCR finds that the proposed project will not affect any documented state-listed plants or insects.

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(vi) Natural Area Preserves

DCR-DNH finds that there are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

8(c) Agency Recommendations.

(i) Pouches Creek Stream Conservation Unit

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control and stormwater management laws and regulations, establishment and enhancement of riparian buffers with native plant species, and maintaining natural stream flow.

(ii) Coastal Plain Depression Swamps and Ponds

Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory for these resources in the Project area. With the survey results DCR-DNH can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources. For Eastern big-eared bats, the Applicant should determine if any roost sites occur within the solar development areas. Areas to survey include large hollow trees, bridges and abandoned structures. DCR-DNH biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Contact Anne Chazal at (804) 786-9014 or anne.chazal@dcr.virginia.gov to discuss arrangements for field work.

(iii) Invasive Species Management Plan

DCR recommends the development of an invasive species management plan for the Project and the planting of native pollinator plants in the buffer areas of the planned facilities which bloom throughout the spring and summer, to maximize benefits to native pollinators. Pollinator plant species should be planted at least in the buffer areas of the planned facility, and optimally including other areas within the project site. Guidance on plant species can be found at the Virginia Solar Site Native Plant Finder. In addition, Virginia native species alternatives to the non-native species listed in the *Virginia Erosion and Sediment Control Handbook (Third Edition 1992)*, can be found in the 2017 addendum titled Native versus Invasive Plant Species. The addendum (page 3) provides a list of native alternatives for non-natives commonly used for site stabilization including native cover crop species (i.e. Virginia wildrye).

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(iv) Core Fragmentation

Minimizing fragmentation is a key mitigation measure that will preserve the natural patterns and connectivity of habitats that are key components of biodiversity. The deleterious effects of fragmentation can be reduced by:

- minimizing edge in remaining fragments (leaving round versus long, skinny fragments);
- retaining connective corridors that allow significant migration between fragments; and
- designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns).

(v) Biotics Data System

Contact the DCR-DNH for updated information on natural heritage resources in the project area should the scope of the project change and/or six months (May 13, 2021) passes before the project is implemented. New and updated information is continually added to the Biotics Data System.

9. Wildlife Resources. According to the EA (E. Threatened and Endangered Species, pages 10-12), the Applicant reviewed the Virginia Department of Game and Inland Fisheries [now the Department of Wildlife Resources] Virginia Fish and Wildlife Information Service (VaFWIS), Wildlife Environmental Review Map Service (WERMS), Northern Long-Eared Bat (NLEB) Winter Habitat and Roost Trees Application, Little Brown Bat (MYLU), and Tri- colored Bat (PESU) Winter Habitat and Roosts Application. No known NLEB winter hibernaculum or maternity roost trees were identified within a 2-mile radius the proposed Project area.

9(a) Agency Jurisdiction. The Virginia Department of Wildlife Resources (DWR) (formerly the Department of Game and Inland Fisheries), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state- or federally-listed endangered or threatened species, but excluding listed insects (Virginia Code, Title 29.1). DWR is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S. Code §661 *et seq.*) and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DWR determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce or compensate for those impacts. For more information, see the DWR website.

9(b) Agency Findings.

(i) Wetland and Stream Impacts

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If instream work or wetland impacts become necessary, DWR anticipates that a JPA will be distributed for agency review. DWR will review and provide additional comments as appropriate. Based on preliminary coordination with the applicant, DWR supports the proposed site-specific best management practices for avoiding and minimizing impacts to wetlands, vernal pool habitats within the site, and their associated threatened and endangered species as described in the EA (E. Threatened and Endangered Species, page 12).

(ii) Wildlife Passage and Fencing

DWR notes that under certain conditions, deer may seek refuge or become entrapped within fenced enclosures. The SCC Application (Exhibit G, Attachment 2, Project Site Plan, page 2) shows a proposed 6-foot high fence closely surrounding solar array clusters, while allowing wildlife passage across the site within wetland areas and variable-width setbacks (buffers). DWR notes that hunting deer is prohibited within any enclosure having fences higher than 61 inches (with certain exceptions not applicable to solar facilities) as described in Virginia Code § 29.1-525.1 and *Regulation* 4 VAC 15-90-291. Please note that the Code and regulatory citations are provided as references to prevent incidental confinement of deer within fenced enclosures, and to facilitate wildlife movement around and through such facilities. Other than this prohibition, DWR does not regulate fencing of projects such as solar energy facilities. Authority to do so, however, rests solely with SCC or local authorities.

(iii) Potential Lake Effect

DWR notes that a contiguous aggregate of panels could result in avian impacts known as "lake effect," in which birds may mistake the reflective solar facility for a water body. Waterbirds are especially at risk because some species require a running start on the water surface and cannot take off from the ground.

(iv) Potential Thermal-Island Effect

DWR notes that a potential for "thermal island" impacts may result from large solar facilities, similar to thermal islands resulting from large paved parking areas. To date, there has been relatively little scientific analysis of those effects.

See DWR comments attached for a detailed discussion of its findings.

9(c) Agency Recommendations.

(i) Wildlife Passage and Fencing

DWR recommends that the Applicant document wildlife travel corridors and observed passage prior to construction, and coordinate with DWR regarding wildlife fencing that would allow ingress and egress through the enclosure. Adaptive strategies may include lower fence height in wildlife corridors, dividing large sites into smaller fenced sub-

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parcels (approximately 40 acres maximum) to establish unfenced wildlife corridors, use of larger mesh fence at ground level (i.e. wildlife-permeable fencing), and facilitating wildlife passage via ground-level openings or pipes (approximately 8-inch diameter) through the fence.

To address wildlife entrapment, perimeter fences around solar facilities should either be no more than 61 inches high or greater than or equal to 96 inches (8 feet) high. Fences lower than 61 inches should provide for the free ingress and egress of deer. Fences of heights between 61 inches and 96 inches are likely to entrap deer that are motivated to enter but not leave the enclosure. Fences over 8 feet, if properly maintained, should exclude deer so that they do not become entrapped. Maintenance along the bottom of an exclusionary fence is critical to prevent deer incursions; fences should be erected tight to the ground and any gaps should be filled with rip rap or other barriers (except at purposeful wildlife crossings).

(ii) Potential Lake Effect

DWR recommends further search and study of available scientific literature on the potential for lake effect. Post construction monitoring may be recommended, based on site-specific conditions.

(iii) Potential Thermal-Island Effect

Further search and study of available scientific literature on thermal-island effect is recommended. Post construction monitoring may be recommended, based on site-specific conditions. According to the EA (pages 6-7), the Project will include a meteorological (met) data collection system which will compile data for transmission to the Data Collection Center. DWR requests these data be shared with the agency so that it can cooperatively evaluate the potential thermal-island effect of the project.

(iv) Erosion and Sediment Control

DWR recommends strict adherence to erosion and sediment controls during all land-disturbing activity.

(v) Enhanced Native Vegetation, Plant Pollinator Species, and Invasive Species Control

DWR recommends the Applicant prepare and implement a plan using native plant-seed mix for all ground cover. Contact DWR and DCR-DNH for guidance regarding native plantings and pollinator seed mixes. Invasive species control should be included as an integral component of the native plant-seed mix planting and pollinator seed mix plan. Post construction monitoring for invasive species is recommended, based on site-specific conditions.

See DWR comments attached for a detailed discussion of its recommendations.

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10. Conservation Easements. The EA does not discuss whether conservation easements are present within the Project area.

10(a) Agency Jurisdiction. The Virginia Outdoors Foundation (VOF) is a public organization created by the Virginia General Assembly in 1966 under Virginia Code § 10.1-1800 to promote the preservation of open-space lands and to encourage private gifts of money, securities, land or other property to preserve the natural, scenic, historic, scientific, open-space and recreational areas of the Commonwealth. The primary way VOF protects land is by holding conservation easements, which are voluntary agreements with landowners that restrict certain types of development on land in perpetuity. VOF also accepts donations of land, which it either protects with an easement and transfers to another landowner, or owns and manages for public benefit.

10(b) Agency Findings. According to VOF, as of November 5, 2020, there are no existing or proposed VOF open-space easements in the immediate vicinity of the project.

10(c) Recommendation. Contact VOF for additional review if the project area changes or if construction does not begin within 24 months.

11. Historic and Archaeological Resources. According to the EA (G. Cultural and Historic Resources, page 13), a Phase I cultural resource survey, including shovel testing, was completed in July 2020 to all accessible areas within the Project site. Additional shovel testing surveys maybe required to expanded areas of the Project site if/when access becomes available. The Applicant has consulted with the Virginia Department of Historic Resources and will continue to consult as necessary. The Applicant will attempt to avoid or minimize any impacts to any National Register-eligible archaeological properties or archaeological properties manifested by above-ground remains, through design changes. If National Register-eligible architectural properties are identified in the areas of potential direct impacts or may be indirectly affected, a similar approach will be taken.

11(a) Agency Jurisdiction. The Virginia Department of Historic Resources conducts reviews of both federal and state projects to determine their effect on historic properties. Under the federal process, DHR is the State Historic Preservation Office, and ensures that federal undertakings-including licenses, permits, or funding-comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation at 36 CFR Part 800. Section 106 requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. For state projects or activities on state lands, DHR is afforded an opportunity to review and comment on (1) the demolition of state property; (2) major state projects requiring an EIR; (3) archaeological investigations on state-controlled land; (4) projects that involve a landmark listed in the Virginia Landmarks Register; (5) the sale or lease of surplus state property; (6) exploration and recovery of underwater historic properties; and (7) excavation or

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removal of archaeological or historic features from caves. See DHR's website for more information about applicable state and federal laws and how to submit an application for review: http://www.dhr.virginia.gov/StateStewardship/Index.htm.

11(b) Requirement. DHR did not respond to the request for comments on the SCC Application. However, Cavalier must continue to coordinate the Project with DHR to ensure historic resources are not adversely affected by the proposal.

12. Water Supply. According to the EA (D. Impact of Solid and Hazardous Waste on Water Resources, page 9), potential impacts to local water resources from solid and hazardous wastes, while not anticipated, have potential to occur during construction of the Project. The Project will implement an Emergency Response Plan and comply with the Virginia Stormwater Management Plan to prevent impacts on local water resources

12(a) Agency Jurisdiction. The Virginia Department of Health (VDH) Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes). VDH administers both federal and state laws governing waterworks operation. The mission of the VDH Onsite Sewage and Water Services is to protect public health and ground water quality. This is best achieved by implementing an onsite wastewater program based on sound scientific, engineering, and public health principles.

12(b) Agency Findings. VDH-ODW finds that there are no public groundwater wells within a 1-mile radius of the Project site and no surface water intakes located within a 5-mile radius of the Project site. The Project is within the watershed of the City of Norfolk's Blackwater River public surface water facility (PWS ID 3710100).

12(c) Requirement. Potential impacts to public water distribution systems must be verified by the local utility.

12(d) Recommendations. VDH recommends that Best Management Practices should be employed on the project site including erosion and sediment controls as well as Spill Prevention Controls and Countermeasures.

For additional information, contact VDH-ODW, Arlene Fields Warren at (804) 864-7781 or arlene.warren@vdh.virginia.gov.

13. Regional Review.

13(a) Agency Jurisdiction. In accordance with the Virginia Code, §15.2-4207, planning district commissions encourage and facilitate local government cooperation and state-local cooperation in addressing, on a regional basis, problems of greater than local significance. The cooperation resulting from this is intended to facilitate the recognition and analysis of regional opportunities and take account of regional influences in planning and implementing public policies and services. Planning district commissions promote the orderly and efficient development of the physical, social and

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economic elements of the districts by planning, and encouraging and assisting localities to plan for the future.

13(b) Agency Findings. The Crater Commission has determined that the proposed project is in full compliance with regional environmental policies and plans.

For additional information, contact CPDC, Denny Morris at (804) 861-1666 or dmorris@craterpdc.org.

14. Pollution Prevention. DEQ advocates that the principles of pollution prevention and sustainability be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices will help to ensure that environmental impacts are minimized. However, pollution prevention and sustainability techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source.

14(a) Recommendations. We have several pollution prevention recommendations that may be helpful in the construction and maintenance of the facility:

- Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed project is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes proponents with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for construction and design.
- Integrate pollution prevention techniques into maintenance and operations, to include inventory control for centralized storage of hazardous materials. Maintenance facilities should have sufficient and suitable space to allow for effective inventory control and preventive maintenance.

DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. If interested, please contact Meghann Quinn at (804) 698-4021 or meghann.quinn@deq.virginia.gov.

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15. Pesticides and Herbicides. In general, when pesticides or herbicides must be used, their use should be strictly in accordance with manufacturers' recommendations. In addition, to the extent feasible, we recommend that the Applicant use the least toxic pesticides or herbicides effective in controlling the target species to the extent feasible. For more information on pesticide or herbicide use, please contact the Virginia Department of Agriculture and Consumer Services at (804) 786-3501.

Received 12/2/2020

REGULATORY AND COORDINATION NEEDS

1. Water Quality and Wetlands. The proposed Project may require VWP individual permit or general permit coverage. The permit review process commences with the submission of a JPA. Questions on the applicability and fulfillment of VWP permit requirements may be addressed to DEQ-TRO, Jeff Hannah at (757) 518-2146 or jeff.hannah@deq.virginia.gov. To obtain a JPA form, contact VMRC at (757) 247-2252.

2. Subaqueous Lands Impacts. Pursuant to section 28.2-1204 of the Code of Virginia, the VMRC has jurisdiction over any encroachments in, on or over any state-owned rivers, streams or creeks in the Commonwealth. Accordingly, Cavalier must coordinate with VMRC to ensure project compliance related to any potential impacts to state subaqueous lands. Submission of a JPA may be required. For additional information and coordination, contact VMRC, Justin Worrell at (757) 247-8063 or justin.worrell@mrc.virginia.gov.

3. Erosion and Sediment Control and Stormwater Management.

3(a) Erosion and Sediment Control and Stormwater Management Plans. Project activities must comply with Virginia's *Erosion and Sediment Control Law* (Virginia Code § 62.1-44.15:61) and *Regulations* (9 VAC 25-840-30 *et seq.*) and *Stormwater Management Law* (Virginia Code § 62.1-44.15:31) and *Regulations* (9 VAC 25-870-210 *et seq.*) as administered by Isle of Wight and Surry Counties. Cavalier must submit a site-specific ESC plan to the local governments for review and approval pursuant to the local ESC ordinances. Note that dependent on local requirements, a separate stormwater management plan may be required for this project.

3(b) General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10). For projects involving land-disturbing activities equal to or greater than one acre, Cavalier is required to apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (VSMA §62.1-44.15:24 *et seq.*; VSMP 9 VAC 25-870-10 *et seq.*). Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ, Holly Sepety at (804) 698-4039 or holly.sepety@deq.virginia.gov.

4. Floodplain Management. The Project must comply with the local floodplain ordinances for those portions of the Project located in Isle of Wight and Surry Counties. Local floodplain administrator contact information may be found on DCR's Local Floodplain Management Directory.

5. Air Quality Regulations. The Project is subject to air pollution control regulations administered by DEQ. The state air pollution regulations that may apply to the project are:

- fugitive dust and emissions control (9 VAC 5-50-60 *et seq.*); and

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- open burning restrictions (9 VAC 5-130 *et seq.*).

For additional information, contact DEQ-TRO, John Brandt at (757) 518-2010 or john.brandt@deq.virginia.gov. Cavalier should contact Isle of Wight and Surry County fire officials to determine any local requirements for open burning.

6. Solid Waste and Hazardous Substances. All solid waste, hazardous waste and hazardous materials must be managed in accordance with all applicable federal, state and local environmental regulations. Contact DEQ-TRO, Sean Priest at (757) 518-2141 or sean.priest@deq.virginia.gov, concerning the location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered.

If evidence of a petroleum release is discovered during implementation of the Project, it must be reported to DEQ in accordance with Virginia Code § 62.1-44.34.8 through 19 and 9 VAC 25-580-10 *et seq.* If necessary, contact DEQ-TRO, Melinda Woodruff at (757) 518-2174 or melinda.woodruff@deq.virginia.gov.

7. Natural Heritage Resources. Contact DCR-DNH, Rene Hypes at (804) 371-2708 or rene.hypes@dcr.virginia.gov, for additional information on:

- an inventory for natural heritage species,
- the development of an invasive species management plan, and
- strategies to minimize core fragmentation.

In addition, Cavalier should secure updated information on natural heritage resources if the scope of the project changes and/or six months passes (May 13, 2021) before the project is implemented, since new and updated information is continually added to the Biotics Data System.

8. Wildlife Resources and Protected Species. DWR is available to further discuss:

- strategies to enhance wildlife passages,
- potential Project lake effect,
- sharing data collected on the potential thermal-island effect,
- native vegetation, plant pollinator species, and
- invasive species control.

Contact DWR, Ernie Aschenbach at (804) 367-2211 or ernie.aschenbach@dwr.virginia.gov, for assistance with the development of project-specific measures to minimize project impacts upon wildlife resources.

9. Conservation Easements. Contact VOF, Mike Hallock-Solomon at (804) 337-9780 or mhallock-solomon@vof.org, for additional review if the project area changes or if construction does not begin within 24 months.

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10. Historic and Archaeological Resources. To ensure compliance with Section 106 of the *National Historic Preservation Act*, as amended, and its implementing regulations at 36 CFR 800, Cavalier should continue to coordinate the Project with DHR. For additional information and coordination, contact DHR, Roger Kirchen at (804) 482-6091 or roger.kirchen@dhr.virginia.gov.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

20122061

TO: John Fisher

We thank **OEIR** for providing DEQ-AIR an opportunity to review the following project:

Document Type: SCC Application
Project Sponsor: State Corporation Commission
Project Title: Cavalier Solar A, LLC, 240 MW Solar Generating Facility Project, PUR-2020-00235
Location: Isle of Wight and Surry
Project Number: DEQ #20-141S

Accordingly, I am providing following comments for consideration.

PROJECT LOCATION: **X OZONE ATTAINMENT AREA**

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO: **X** **CONSTRUCTION**
☐ OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-45-760 et seq. – Asphalt Paving operations
3. **X** **9 VAC 5-130 et seq. – Open Burning**
4. **X** **9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
5. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to_____
6. ☐ 9 VAC 5-60-300 et seq. – Standards of Performance for Toxic Pollutants
7. ☐ 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the_____
8. ☐ 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
9. ☐ 9 VAC 5-80-1605 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
10. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
11. ☐ 9 VAC 5-80-800 et seq. Of the regulations – State Operating Permits. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

).

K S. Narasimhan

(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: October 22, 2020

20122001

VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

MEMORANDUM

TO: John Fisher, DEQ/EIR Environmental Program Planner

FROM: Carlos A. Martinez, Division of Land Protection & Revitalization Review Coordinator

DATE: November 12, 2020

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Review: 20-141S Cavalier Solar A, LLC 240 MW Solar Generating Facility Project in Isle of Wight and Surry, Virginia.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the State Corporation Commission's October 19, 2020 EIR for Cavalier Solar A, LLC 240 MW Solar Generating Facility Project in Isle of Wight and Surry, Virginia.

DLPR staff conducted a search (500 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR identified one (1) petroleum release sites within the project area which might impact the project.

DLPR staff has reviewed the submittal and offers the following comments:

Hazardous Waste/RCRA Facilities – none in close proximity to the project area

CERCLA Sites – none in close proximity to the project area

Formerly Used Defense Sites (FUDS) – none in close proximity to the project area.

Solid Waste – none in close proximity to the project area

Virginia Remediation Program (VRP) – none in close proximity to the project area

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***Petroleum Releases* – One (1) found in close proximity to the project area.**

1. ***PC Number 19992319, SEPTA Substation, Rte 626 NW of Rte 627 Int and Rte 681 Int, Smithfield, Virginia 23430, Release Date: 11/15/2004, Status: Closed.***

Please note that the DEQ's Pollution Complaint (PC) cases identified should be further evaluated by the project engineer or manager to establish the exact location, nature and extent of the petroleum release and the potential to impact the proposed project. In addition, the project engineer or manager should contact the DEQ's Tidewater Regional Office at (757) 518-2000 (Tanks Program) for further information about the PC cases.

PROJECT SPECIFIC COMMENTS

None

GENERAL COMMENTS

Soil, Sediment, Groundwater, and Waste Management

Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Carlos A. Martinez by phone at (804) 698-4575 or email carlos.martinez@deq.virginia.gov

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

Re: NEW PROJECT SCC Cavalier Solar A, LLC, PUR 2020-00235, DEQ #20-141S

1 message

Gavan, Lawrence <larry.gavan@deq.virginia.gov> Mon, Oct 19, 2020 at 12:30 PM
To: "Fisher, John" <john.fisher@deq.virginia.gov>

(a) Agency Jurisdiction. The DEQ administers the nonpoint source pollution control enforceable policy of the VCP through the *Virginia Erosion and Sediment Control Law and Regulations* (*VESCL&R*) and *Virginia Stormwater Management Law and Regulations* (*VSWML&R*).

(b) Erosion and Sediment Control Plan. The Applicant is responsible for submitting a project-specific erosion and sediment control (ESC) plan to the locality in which the project is located for review and approval pursuant to the local ESC requirements, if the project involves a land-disturbing activity of 10,000 square feet or more (2,500 square feet or more in a Chesapeake Bay Preservation Area). Depending on local requirements the area of land disturbance requiring an ESC plan may be less. The ESC plan must be approved by the locality prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project must be covered by the project specific ESC plan. Local ESC program requirements must be requested through the locality. [Reference: *Virginia Erosion and Sediment Control Law* §62.1-44.15 et seq.; *Virginia Erosion and Sediment Control Regulations* 9VAC25-840-10 et seq.]

(c) Stormwater Management Plan. Depending on local requirements, a Stormwater Management (SWM) plan may be required. Local SWM program requirements must be requested through the locality. [Reference: *Virginia Stormwater Management Act* §62.1-44.15 et seq.; *Virginia Stormwater Management* (*VSMP*) *Permit Regulations* 9VAC25-870-10 et seq.]

(d) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The operator or owner of a construction project involving land-disturbing activities equal to or greater than 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the General Permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available at http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx
(Reference: VSWML 62.1-44.15 et seq.; VSMP Permit Regulations 9VAC 25-880 et seq.)

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax: 804-698-4019 - TDD (804) 698-4021
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

MEMORANDUM

TO: John Fisher, DEQ Office of Environmental Impact Review

FROM: Amber Foster, DEQ Principal Environmental Planner

DATE: October 19, 2020; Updated November 13, 2020; Updated 12/2/2020

SUBJECT: DEQ #20-141S – Cavalier Solar A, LLC, 240 MW Solar Generating Facility Project, PUR-2020-00235

We have reviewed the Environmental Impact Report submittal for the proposed project and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations):

Based on a desktop review using both the Isle of Wight County and Surry County online mapping programs, it has been determined that the project site lies outside of the Chesapeake Bay Preservation Areas. Therefore, this project is not subject to the Regulations.

20122601

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION

TO: John Fisher

FROM: Michelle Henicheck
Michelle Henicheck
Office of Wetlands and Stream Protection

DATE: November 6, 2020

SUBJECT: Application of Cavalier Solar A, LLC
State Corporation Commission, Case No. PUR-2020-00235:
For approval and certification of a solar generating facility totaling
up to 240 megawatts in Surry County, and Isle of Wight County, Virginia

We have reviewed the information provided in the Environmental Assessment for the above referenced project.

The DEQ's Office of Wetlands and Stream Protection (OWSP) has reviewed the information concerning the above-referenced project. The Cavalier Solar A, LLC ("Project") proposes to construct the new electric solar generation and transmission facilities in Surry County and Isle of Wight County, Virginia (the "Project"). The Project involves the construction and installation of up to 240 MW AC, approximately 634,000 solar photovoltaic modules. A 34.5 kV medium voltage feeder line will run through the middle of the Site to the Project Substation in Isle of Wight County, and a 500kV generation-tie line from the Project Substation to the Septa Substation.

According to the report, "identification of tidal and non-tidal wetlands will be completed during the field investigation and delineations of wetlands and Waters of the United States. Depending on the type and amount of impacts, a Section 404 Permit may be required by the U.S. Army Corps of Engineers ("USACE") and/or a Section 401 Permit or Certification issued by the Virginia DEQ. Potential impacts to wetlands would include conduit and road crossings for construction and maintenance vehicles. The amount of impacts will not be known until final design of the Project has been completed, and a final wetlands delineation report has been prepared and accepted by the USACE. The Project will likely be seeking a Nationwide Permit for utility line and/or road crossings; the 401 certification will be part of this permit." Based on this information, the Office of Wetlands and Stream Protection (OWSP) is unable to determine potential wetland and stream impacts.

The DEQ Piedmont Regional Office (PRO) will make the final permitting decisions.

Based upon review of the information provided, DEQ's OWSP offers the following general recommendations concerning potential surface water impacts:

1. Wetland and stream impacts, including any secondary impacts, should be avoided and minimized to the maximum extent practicable.
2. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the Corps.

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3. At a minimum, any required compensation for impacts to State Waters, including the compensation for permanent conversion of forested wetlands to emergent wetlands, should be in accordance with all applicable state regulations and laws. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed.
4. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
5. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. Furthermore the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.
6. Erosion and sedimentation controls should be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.
7. No machinery may enter surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage.
8. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
9. Activities should be conducted in accordance with any Time-of-Year restriction(s) as recommended by the Department of Game and Inland Fisheries, the Department of Conservation and Recreation, or the Virginia Marine Resources Commission. The permittee should retain a copy of the agency correspondence concerning the Time-of-Year restriction(s), or the lack thereof, for the duration of the construction phase of the project.
10. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete should be prohibited from entering surface waters.
11. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the U.S. Fish & Wildlife Service. These herbicides should be applied according to label directions by a licensed herbicide applicator. A non-petroleum based surfactant should be used in or around any surface waters.

Permits:

Based on DEQ's review of the Environmental Assessment provided November 2020, the proposed project may require a Virginia Water Protection (VWP) individual permit or general permit coverage. If a permit is necessary, the applicant may submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ.

20120001

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE

Environmental Impact Review
Coordination Review

To: Office of Environmental Impact Review

From: Craig Nicol, Regional Director

Date: November 5, 2020

Project: SCC Cavalier Solar A, LLC, PUR 2020-00235 - DEQ #20-141S

As requested, the DEQ Tidewater Regional Office has reviewed the supplied information and offers the following comments:

Air Compliance Program :
The following air regulations may be applicable: Virginia Administrative Code 9 VAC 5-50-60 *et seq.* which addresses the abatement of visible emissions and fugitive dust emissions, and Virginia Administrative Code 9 VAC 5-130-10 et *seq.* which addresses open burning. For additional information, contact John Brandt, DEQ-TRO at (757) 518-2010.

Land Program (Solid and Hazardous Waste):
All construction and demolition waste, including any excess soil, must be characterized in accordance with the Virginia Hazardous Waste Management Regulations and disposed of at an appropriate facility as applicable.
For additional information, contact Sean Priest, DEQ-TRO at (757)518-2141or jonathan.priest@deq.virginia.gov .

Stormwater:
A construction general permit (CGP) is required prior to commencement of land disturbing activities greater than 1 acre for the discharge of sediment from construction activities. An approved Erosion and Sediment Control Plan (<1 acre of land disturbance) or an approved Stormwater Management Plan (>1 acre of land disturbance) is required prior to commencement of any land disturbing activities. Plan approval is required from the locality prior to commencement of land disturbance. For additional information, contact Courtney Smith, DEQ-TRO at (757)493-1072.

Virginia Water Protection Permit Program (VWPP):
Potential adverse impacts to water quality and wetlands resulting from surface runoff due to construction activities must be minimized. This can be achieved by using Best Management Practices (BMPs). Permanent or temporary impacts to surface waters and wetlands may require a permit pursuant to §401 of the Clean Water Act, Virginia Code §62.1-44.15:20, and Virginia Administrative Code 9 VAC 25-210-10 *et seq.* Provided that any and all necessary permits are obtained and complied with, the project will be consistent with DEQ program

requirements. For additional information, contact Jeff Hannah, DEQ-TRO at (757)518-2146.

20122901

Water Permit Program (VPDES):

No comments as there does not appear to be any point source discharges of process water or wastewater associated with this project that would necessitate a VPDES permit.

Petroleum Storage Tank Program:

DEQ records do not indicate any reported petroleum releases along the proposed project footprint. If evidence of a petroleum release is discovered during implementation of this project, it must be reported to DEQ, as authorized by CODE # 62.1-44.34.8 through 19 and 9 VAC 25-580-10 et seq. Contact Ms. Melinda Woodruff at (757) 518-2174. Petroleum-contaminated soils and ground water generated during implementation of this project must be properly characterized and disposed of properly.

Based on the submitted information, it appears the proposed project will result in a *[Level of impact]* environmental impact.

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

20212604

ESSLog 39827; NEW PROJECT SCC Cavalier Solar A, LLC, PUR 2020-00235, DEQ #20-141S

1 message

Aschenbach, Ernst <ernie.aschenbach@dwr.virginia.gov> Fri, Nov 13, 2020 at 4:25 PM
To: "Fisher, John (DEQ)" <John.Fisher@deq.virginia.gov>, Ernst Aschenbach <ernie.aschenbach@dwr.virginia.gov>, "ProjectReview (DGIF)" <projectreview@dwr.virginia.gov>

We have reviewed the above-referenced project and have the following comments.

According to the project materials (Environmental Assessment, pp. 3 - 8), the 240 Megawatt (MW) project is approximately 1,776 acres on a compilation of parcels consisting of agricultural land, cleared forest and timber land located in Surry County and Isle of Wight County, Virginia. The site is currently silviculture and is undergoing extensive clearing after which the Site has the potential to be converted to a solar generating facility (EA, p.13).

According to our records, in 2019 DGIF (now the Department of Wildlife Resources) was contacted by a consultant representing the applicant requesting preliminary project coordination pertaining to Threatened and Endangered (T&E) species known from the region, potentially suitable habitat found on site, and guidance to develop a proposed avoidance buffer model for vernal ponds (pools) and wetlands. This preliminary coordination is mentioned in the application (EA, p. 12). Our comments reiterate our support of the proposed site-specific avoidance buffering.

The Applicant reviewed the Virginia Department of Game and Inland Fisheries ("VDGIF"), Virginia Fish and Wildlife Information Service ("VaFWIS"), VDGIF's Wildlife Environmental Review Map Service ("WERMS"), VDGIF's Northern Long-Eared Bat ("NLEB") Winter Habitat and Roost Trees Application, VDGIF's Little Brown Bat ("MYLU") and Tri- colored Bat ("PESU") Winter Habitat and Roosts Application, Department of Conservation and Recreation ("DCR") Natural Heritage Data Explorer ("NHDE"), and US Fish and Wildlife Service ("USFWS") Information for Planning and Conservation ("IPAC") databases for an analysis of potential impacts to natural heritage resources and threatened and endangered species (EA, p. 10). Based on this analysis, the project has the potential to impact wetlands and vernal pools within the site. The T&E species known to be regionally associated with critical habitat provided by vernal pools and wetlands, include the state Threatened (ST) Mabee's salamander, state Endangered (SE) Eastern tiger salamander, and ST barking tree frog.

Wetland or stream impacts: Potential impacts could include conduit and road crossings for construction and maintenance vehicles. The amount of impacts will not be known until final design of the Project has been completed, and a final wetlands delineation report has been prepared. For unavoidable impacts, the appropriate water quality permits will be applied for (EA, p. 9). If instream work or wetland impacts become necessary, we anticipate a Joint Permit Application (JPA) will be distributed for agency review. We will review and provide additional comments as appropriate.

Based on preliminary coordination with the applicant, we support the proposed site-specific best management practices for avoiding and minimizing impacts to wetlands, vernal pool habitats within the site, and their associated threatened and endangered species. The site has been configured to minimize impacts to wetlands and waters. A 100-foot buffer will be provided around all low quality vernal pools and a 300-foot buffer or wildlife corridor to the

larger wetland complex surrounding the Project Site (Passenger Swamp) will be implemented. In addition, there will be no impacts to isolated wetlands, stream features or bottomland hardwood wetland systems. Connection to solar fields will be achieved via directional drill or overhead lines for upland to upland in wetland areas. All construction staging will be located in uplands. Erosion and sediment controls will be utilized and maintained throughout construction. The Project will implement erosion and sediment control measures during construction to further prevent potential impacts to the vernal pools and perform any required field surveys to determine presences at any wetland impact locations. Therefore, no impacts to critical habitat are anticipated as a result of the Project (EA, p. 12).

2012090041

Wildlife passage and fencing: Solar facilities typically incorporate perimeter fencing that may act as a barrier to ground-based wildlife movement. We recommend documenting wildlife travel corridors and observed passage prior to construction activities, and encourage the consultant/applicant to coordinate with DWR regarding wildlife fencing that would allow ingress and egress through the enclosure. Adaptive strategies may include lower fence height in wildlife corridors; dividing large sites into smaller fenced sub-parcels (approximately 40 acres maximum) to establish unfenced wildlife corridors; use of larger mesh fence at ground level (i.e., "wildlife-permeable fencing"); and facilitating wildlife passage via ground-level openings or pipes (approximately 8-inch diameter) through the fence.

Fence design recommendations for deer management: Under certain conditions deer may seek refuge or become entrapped within fenced enclosures. To address this concern, perimeter fences around solar facilities should either be no more than 61" high OR greater than or equal to 96" (8') high. Fences lower than 61" should provide free ingress and egress of deer. Fences of heights between 61" and 8' are likely to entrap deer that are motivated to enter but not leave the enclosure. Fences over 8', if properly maintained, should exclude deer so that they do not become entrapped. Maintenance along the bottom of an exclusionary fence is critical to prevent deer incursions; fences should be erected tight to the ground and any gaps should be filled with rip rap or other barriers (except at purposeful wildlife crossings).

Notes regarding our fence design recommendations: Hunting deer is prohibited within any enclosure having fences higher than 61" (with certain exceptions not applicable to solar facilities). This prohibition is documented and explained in the Code of Virginia (29.1-525.1) and DWR regulations (4VAC15-90-291). Other than this prohibition, DWR does not regulate fencing of projects such as solar energy facilities.

These recommendations regarding design of fences around solar energy facilities are provided as a service to DEQ and to project applicants, to advise them of our recommendations to prevent incidental confinement of deer within their fenced enclosures, and to facilitate wildlife movement around and through such facilities. The Code and regulatory citations are provided as references, and to confirm that hunting within enclosures that do not comport with these recommendations (i.e., greater than 61 inches in height) is prohibited.

To summarize, our recommendation is that the fences enclosing solar facilities should either be 61 inches or less in height, so that deer will have easy ingress and egress to/from the enclosure; or that the fences (including barbed wire if desired) be at least 96 inches in height, so that deer would not normally enter the site. These are DWR's recommendations to efficiently and safely manage deer at these facilities: DWR has no statutory or regulatory authority to enforce these recommendations. That said, we encourage all applicants to abide by these recommendations, and we encourage DEQ to include our recommendations in its response to the State Corporation Commission (SCC). Authority to do so, however, rests solely with SCC or local authorities.

According to the project materials (Attachment 2 – Project Site Plan, p. 2), the proposed 6-foot high fence closely surrounds solar array clusters, while allowing wildlife passage across the site within wetland areas and variable-width setbacks (buffers). The applicant does not anticipate impacts to wildlife resources associated with the facility (EA, p. 13). We recommend continued coordination with DWR regarding fencing and wildlife passage as appropriate.

2012080

Potential Lake Effect: It has been suggested that contiguous aggregate of panels could result in avian impacts known as "lake effect," in which birds may mistake the reflective solar facility for a water body. Waterbirds are especially at risk because some species require a running start on the water surface and cannot take off from the ground. Further search and study of available scientific literature is recommended. Post construction monitoring may be recommended, based on site-specific conditions.

Potential Thermal-Island Effect: It has been suggested that potential "thermal island" impacts may result from large solar facilities, similar to thermal islands resulting from large paved parking areas. To date, there has been relatively little scientific analysis of those effects. Further search and study of available scientific literature is recommended. Post construction monitoring may be recommended, based on site-specific conditions. According to the Environmental Assessment (EA, pp. 6 - 7), the Project will include a meteorological ("met") data collection system. The met station will have the following weather sensors; a pyranometer for measuring solar irradiance, a thermometer for measuring air temperature, a barometric pressure sensor to measure atmospheric pressure, and two wind sensors to measure speed and direction. These sensors will be connected to a data logger to compile the data for transmission to the Data Collection Center. We request these data be shared with DWR so that we can cooperatively evaluate the potential thermal island effect of the project.

Strict adherence to Erosion and Sediment Controls: We recommend strict adherence to E&S controls during all land-disturbing activity. The project will comply with all requirements for stormwater management and erosion and sediment controls. Stormwater control measures will include Best Management Practices (BMPs) such as retention, extended detention, and low impact design (EA, p. 8).

Enhanced Native Vegetation, Plant Pollinator Species, & Invasive Species Control: We recommend the applicant prepare and implement a plan using native plant-seed mix for all ground cover. We recommend the consultant or applicant contact DWR and DCR-DNH for guidance regarding native plantings and pollinator seed mixes. We recommend invasive species control be included as an integral component of the native plant-seed mix planting and pollinator seed mix plan. Post construction monitoring for invasive species is recommended, based on site-specific conditions.

Regulatory agencies with oversight responsibilities for all environmental aspects of the Project will continue to be engaged in the review of this Project, exercising oversight and applying permitting or regulatory requirements on the construction and operation of the Project as required. Due to the design and operation of the Project, as well as the applicable regulatory requirements, the Project will have no or minimal adverse environmental effects (EA, p. 16). We support the applicant continuing to coordinate with us.

Thank you for the opportunity to review this project and provide comments. Please call if you have questions.

Please note as of July 1, 2020 DGIF will become the Department of Wildlife Resources (DWR). Our new email addresses will end in @dwr.virginia gov*

Ernie Aschenbach
Environmental Services Biologist
P 804.367.2733
Email: Ernie.Aschenbach@dgif.virginia.gov
New Email: Ernie.Aschenbach@dwr.virginia.gov
Virginia Department of Wildlife Resources
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228-0778
www.dwr.virginia.gov

20122901

39827_FIGURE1_SEASONAL_POOL_PROPOSED_BUFFERS_20190506kh.pdf
3514K

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

20201030

Re: NEW PROJECT SCC Cavalier Solar A, LLC, PUR 2020-00235, DEQ #20-141S

1 message

Warren, Arlene <arlene.warren@vdh.virginia.gov> Fri, Oct 30, 2020 at 2:29 PM
To: John Fisher <john.fisher@deq.virginia.gov>, rr Environmental Impact Review <eir@deq.virginia.gov>

Project Name: Cavalier Solar A, LLC, 240 MW Solar Generating Facility Project, PUR-2020-00235
Project #: 20-141 S
UPC #: N/A
Location: Isle of Wight and Surry

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
3710100	NORFOLK, CITY OF	BLACKWATER RIVR

• **Environmental Epidemiology, Mr. Dwight Flammia, Ph.D. State Public Health Toxicologist, had no comments to add.**

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781

COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Bldg 96
Fort Monroe, VA 23651-1064

Matthew J. Strickler
Secretary of Natural Resources

Steven G. Bowman
Commissioner

2012080-1

November 2, 2020

Department of Environmental Quality
Office of Environmental Impact Review
Attn: John Fisher
1111 East Main St.
Richmond, VA 23219

Re: SCC Cavalier Solar A, LLC, PUR 2020-00235, DEQ #20-141S

Dear Mr. Fisher,

This will respond to the request for comments regarding the Environmental Assessment for the 240 MW Solar Generating Facility Project, PUR-2020-00235 (DEQ #20-141S), prepared by the State Corporation Commission, on behalf of Cavalier Solar A, LLC. Specifically, Cavalier Solar A, LLC has proposed the construction of a solar generating facility to provide additional solar generation capacity to Virginia. The project is located in southeastern Surry County and northeastern Isle of Wight County and may include potential impacts to nontidal wetlands and State-owned submerged lands.

We reviewed the provided documents and determined that the proposal may require a permit from the Virginia Marine Resources Commission (VMRC).

Please be advised that the Virginia Marine Resources Commission (VMRC), pursuant to §28.2-1200 et seq of the Code of Virginia, administers permits required for impacts proposed to State-owned submerged lands, tidal wetlands, and beach and dunes. All jurisdictional impacts will be reviewed by the VMRC during the Joint Permit Application process. Should the proposed project change, a new review by this agency may be required relative to these jurisdictional areas. Any permit issued by the VMRC will specify necessary special conditions for the project.

If you have any questions please contact me at (757) 247-8063 or by email at justin.worrell@mrc.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

Justin Worrell
Environmental Engineer, Habitat Management

JW/tlb
HM

20120901

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

RE: NEW PROJECT SCC Cavalier Solar A, LLC, PUR 2020-00235, DEQ #20-141S

1 message

ImpactReview <impactreview@vof.org> Thu, Nov 5, 2020 at 9:33 AM
To: "Fulcher, Valerie" <valerie.fulcher@deq.virginia.gov>, "Fisher, John (DEQ)" <John.Fisher@deq.virginia.gov>

Mr. Fisher,

The Virginia Outdoors Foundation has reviewed the project referenced above. As of 5 November 2020, there are not any existing nor proposed VOF open-space easements in the immediate vicinity of the project.

Please contact VOF again for further review if the project area changes or if this project does not begin within 24 months. Thank you for considering conservation easements.

Thanks,

Mike

Mike Hallock-Solomon, AICP

Virginia Outdoors Foundation

From: Fulcher, Valerie <valerie.fulcher@deq.virginia.gov>
Sent: Monday, October 19, 2020 11:44 AM
To: rr dgif-ESS Projects <essprojects@dgif.virginia.gov>; Roberta Rhur <robbie.rhur@dcr.virginia.gov>; odwreview (VDH) <odwreview@vdh.virginia.gov>; Birge, Tiffany <tiffany.birge@mrc.virginia.gov>; Keith Tignor <keith.tignor@vdacs.virginia.gov>; ImpactReview <impactreview@vof.org>; Nicol, Craig <craig.nicol@deq.virginia.gov>; Carlos Martinez <carlos.martinez@deq.virginia.gov>; Kotur Narasimhan <kotur.narasimhan@deq.virginia.gov>; Lawrence Gavan <larry.gavan@deq.virginia.gov>; Michelle Henicheck <michelle.henicheck@deq.virginia.gov>; Daniel Moore <daniel.moore@deq.virginia.gov>; Holly Sepety <holly.sepety@deq.virginia.gov>; Roger Kirchen <roger.kirchen@dhr.virginia.gov>; rr EIR Coordination <eir.coordination@vdot.virginia.gov>; Terrance Lasher <terry.lasher@dof.virginia.gov>; dmorris@craterpdc.org; planreview@iwus.net; jlynn@surrycountyva.gov; Ben McFarlane <bmcfarlane@hrpdcva.gov>
Cc: John Fisher <john.fisher@deq.virginia.gov>
Subject: NEW PROJECT SCC Cavalier Solar A, LLC, PUR 2020-00235, DEQ #20-141S

Alert: This email originated from outside VOF

Good morning - this is a new OEIR review request/project:

Document Type: SCC Application

Project Sponsor: State Corporation Commission

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

2021 0 0 0 0 1 2 4 0

NEW PROJECT SCC Cavalier Solar A, LLC, PUR 2020-00235, DEQ #20-141S

1 message

Dennis Morris <dmorris@craterpdc.org> Fri, Oct 30, 2020 at 11:45 AM
To: John Fisher <john.fisher@deq.virginia.gov>

Dear John,

The Crater Planning District Commission has reviewed the information regarding the SCC Cavalier Solar A; LLC, PUR-2020-00235 (Project No. DEQ 20-1415) project proposal.

The Crater Commission has determined that the proposed project is in full compliance with regional environmental policies and plans.

Thank you for allowing the Crater Commission to comment on this proposed Application.

Denny Morris
Crater Planning District Commission
(804) 861-1666

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

Russell W. Baxter
Deputy Director of Dam Safety & Floodplain Management and Soil & Water Conservation

Nathan Burrell
Deputy Director of Government and Community Relations

Thomas L. Smith
Deputy Director of Operations

MEMORANDUM

DATE: November 13, 2020

TO: John Fisher, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ 20-141S, Cavalier Solar A, LLC, 240 MW Solar Generating Facility Project

Division of Natural Heritage

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

According to the information currently in our files, the Clontz Place Conservation Site and the Shrub Pocosin Powerline East Conservation Site are located within the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Clontz Place Conservation Site and the Shrub Pocosin Powerline East Conservation Site have been given a biodiversity significance ranking of B5, which represents a site of general biodiversity significance. The natural heritage resource of concern at these sites is:

Corynorhinus rafinesquii macrotis	Eastern big-eared bat	G3G4T3/S2/NL/LE

The Eastern big-eared bat named for its enormous ears twice the length of its head, is extremely rare in Virginia and is currently known only from the southeastern portion of the state. Although widespread throughout the southeast, they are never found in large numbers. These bats roost singly or in small groups in hollow trees or abandoned buildings. They forage only after dark primarily in mature forests of both upland and lowland areas along permanent bodies of water (NatureServe, 2009). The details of this bat's feeding behavior and much of its natural history remain a mystery. Lack of information regarding the ecology of the Eastern big-eared bat, and their sensitivity to disturbance, make them particularly

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vulnerable to destruction of roost sites and feeding areas where their presence goes undetected (Handley and Schwab 1991, Harvey 1992).

Threats to this species include forest destruction, particularly hollow tree removal, decreasing availability of abandoned buildings, and possibly, insecticides. Please note that this species is currently classified as endangered by the Virginia Department of Wildlife Resources (VDWR).

Furthermore, the Pouches Creek Stream Conservation Unit is located within the project site. Stream Conservation Units (SCUs) identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Pouches Creek SCU has been given a biodiversity ranking of B4, which represents a site of moderate significance. The natural heritage resource associated with this site is:

Aquatic Natural Community (SC-Blackwater Second Order Stream) G3/S3/NL/NL

The documented Aquatic Natural Community is based on Virginia Commonwealth University's **INSTAR** (*Interactive Stream Assessment Resource*) database which includes over 2,000 aquatic (stream and river) collections statewide for fish and macroinvertebrate. These data represent fish and macroinvertebrate assemblages, instream habitat, and stream health assessments. The associated Aquatic Natural Community is significant on multiple levels. First, this stream is a grade B, as per the VCU-Center for Environmental Sciences (CES), indicating its relative regional significance, considering its aquatic community composition and the present-day conditions of other streams in the region. This stream reach also holds as a "Healthy" stream designation as per the INSTAR Virtual Stream Assessment (VSS) score. This score assesses the similarity of this stream to ideal stream conditions of biology and habitat for this region. Lastly, this stream contributes to high Biological Integrity at the watershed level (6th order) based on number of native/non-native, pollution-tolerant/intolerant and rare, threatened or endangered fish and macroinvertebrate species present.

Threats to the significant Aquatic Natural Community and the surrounding watershed include water quality degradation related to point and non-point pollution, water withdrawal and introduction of non-native species.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations, establishment/enhancement of riparian buffers with native plant species and maintaining natural stream flow.

Finally, the Coastal Plain Depression Swamps and Ponds (G2/SNR/NL/NL) natural community has been documented within the parcel north of Route 621 in "Belle Meadow Pocosin". In addition, according to a DCR biologist, many vernal pools / ephemeral ponds are in the project area including 20-30 possible ponds within the project site.

Coastal Plain Depression Swamps and Ponds are a diverse group of poorly-drained wetlands characteristic of flat Coastal Plain terraces with fluctuating, seasonally perched water tables. Most of these wetlands are seasonally flooded and are believed to be sinkhole features that formed through dissolution of underlying carbonate-rich, shell marl deposits. Vegetation in this group varies from forested to entirely herbaceous, representing a sizeable number of distinct community types. Depth and duration of seasonal inundation

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are apparently the most important factors influencing community composition and the degree to which woody species become established. Coastal Plain depression swamps and ponds are relatively rare, small-patch communities that provide important habitat for the state-rare chicken turtle (*Deirochelys reticularia*) and three state-listed amphibians: Mabee's salamander (*Ambystoma mabeei*, G4/S1S2/NL/LT), Tiger salamander (*Ambystoma tigrinum*, G5/S1/NL/LE), and Barking tree frog (*Hyla gratiosa*, G5/S1/NL/LT). In addition, the globally rare plants Harper's fimbry (*Fimbristylis perpusilla*, G2/S1/SOC/LE) and Pondspice (*Litsea aestivalis*, G3/S1/NL/NL) are confined to these habitats in Virginia.

According to DCR biologists and predicted suitable habitat modeling, there is potential for Mabee's salamander, Tiger salamander, Barking treefrog, Oak toad *(Anaxyrus quercicus*, G5/S2/NL/NL), rare natural communities (such as seasonal ponds), many rare plants, and additional populations of Eastern big-eared bat to occur in the project area if suitable habitat exists on site.

Due to the potential for this site to support populations of these natural heritage resources, DCR recommends an inventory for the resources in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources. For Eastern big-eared bats, determine if any roost sites occur within the solar development areas. Areas to survey include large hollow trees, bridges and abandoned structures. Due to the legal status of the Eastern big-eared bat, DCR recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDWR, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

DCRDivision of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at anne.chazal@dcr.virginia.gov or 804-786-9014 to discuss arrangements for field work.

DCR also recommends the development of an invasive species management plan for the project and the planting of Virginia native pollinator plant species that bloom throughout the spring and summer, to maximize benefits to native pollinators. DCR recommends planting these species in at least the buffer areas of the planned facility, and optimally including other areas within the project site. Guidance on plant species can be found here: http://www.dcr.virginia.gov/natural-heritage/solar-site-native-plants-finder. In addition, Virginia native species alternatives to the non-native species listed in the Virginia Erosion and Sediment Control Handbook (Third Edition 1992), can be found in the 2017 addendum titled "Native versus Invasive Plant Species", here: https://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/NativeInvasiveFAQ.pdf. Page 3 of the addendum provides a list of native alternatives for non-natives commonly used for site stabilization including native cover crop species (i.e. Virginia wildrye).

In addition, the proposed project will fragment C3, C4, and C5 cores as identified in the Virginia ConservationVision. The Virginia ConservationVision is a GIS analysis for identifying and prioritizing conservation lands in Virginia.(http://www.dcr.virginia.gov/natural_heritage/vaconvision.shtml)

Cores are areas of unfragmented natural cover with at least 100 acres of interior condition and provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection), and carbon sequestration, along with the associated economic benefits of these functions. The cores are ranked form 1 to 5 (5 being the least

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ecological relevant) using many prioritization criteria, such as the number of natural heritage resources (i.e. rare species) occurring in a core.

Fragmentation occurs when a large, contiguous ecosystem is transformed into one or more smaller patches surrounded by disturbed areas resulting from the conversion and development. Habitat fragmentation results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species.

Therefore minimizing fragmentation is a key mitigation measure that will preserve the natural patterns and connectivity of habitats that are key components of biodiversity. The deleterious effects of fragmentation can be reduced by minimizing edge in remaining fragments (leaving round versus long, skinny fragments); by retaining connective corridors that allow significant migration between fragments; and by designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns).

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

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

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months (May 13, 2021) has passed before it is utilized.

The VDWR maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from https://vafwis.dgif.virginia.gov/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dwr.virginia.gov.

Division of Dam Safety and Floodplain Management

Floodplain Management Program:
The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

State Agency Projects Only
Executive Order 45, signed by Governor Northam and effective on November 15, 2019, establishes mandatory standards for development of state-owned properties in Flood-Prone Areas, which include

Special Flood Hazard Areas, Shaded X Zones, and the Sea Level Rise Inundation Area. These standards shall apply to all state agencies.

1. Development in Special Flood Hazard Areas and Shaded X Zones
    A. All development, including buildings, on state-owned property shall comply with the locally-adopted floodplain management ordinance of the community in which the state-owned property is located and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
    B. If any state-owned property is located in a community that does not participate in the NFIP, all development, including buildings, on such state-owned property shall comply with the NFIP requirements as defined in 44 CFR §§ 60.3, 60.4, and 60.5 and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
        (1) These projects shall be submitted to the Department of General Services (DGS), for review and approval.
        (2) DGS shall not approve any project until the State NFIP Coordinator has reviewed and approved the application for NFIP compliance.
        (3) DGS shall provide a written determination on project requests to the applicant and the State NFIP Coordinator. The State NFIP Coordinator shall maintain all documentation associated with the project in perpetuity.
    C. No new state-owned buildings, or buildings constructed on state-owned property, shall be constructed, reconstructed, purchased, or acquired by the Commonwealth within a Special Flood Hazard Area or Shaded X Zone in any community unless a variance is granted by the Director of DGS, as outlined in this Order.

The following definitions are from Executive Order 45:

Development for NFIP purposes is defined in 44 CFR § 59.1 as "Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

The Special Flood Hazard Area may also be referred to as the 1% annual chance floodplain or the 100-year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study. This includes the following flood zones: A, AO, AH, AE, A99, AR, AR/AE, AR/AO, AR/AH, AR/A, VO, VE, or V.

The Shaded X Zone may also be referred to as the 0.2% annual chance floodplain or the 500- year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study.

The Sea Level Rise Inundation Area referenced in this Order shall be mapped based on the National Oceanic and Atmospheric Administration Intermediate-High scenario curve for 2100, last updated in 2017, and is intended to denote the maximum inland boundary of anticipated sea level rise.

"State agency" shall mean all entities in the executive branch, including agencies, offices, authorities, commissions, departments, and all institutions of higher education.

"Reconstructed" means a building that has been substantially damaged or substantially improved, as defined by the NFIP and the Virginia Uniform Statewide Building Code.

<u>Federal Agency Projects Only</u>

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Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR's Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must reach out to the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. For state projects, DCR recommends that compliance documentation be provided prior to the project being funded. For federal projects, the applicant/developer is encouraged reach out to the local floodplain administrator and comply with the community's local floodplain ordinance.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris

To find community NFIP participation and local floodplain administrator contact information, use DCR's Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

CC: Amy Ewing, VDWR

Exhibit B

Solar Acoustic Levels

STUDY OF ACOUSTIC AND EMF LEVELS FROM SOLAR PHOTOVOLTAIC PROJECTS

MASSACHUSETTS CLEAN ENERGY CENTER

Prepared for:
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FOCUSED KNOWLEDGE. REAL SOLUTIONS.

STUDY OF ACOUSTIC AND EMF LEVELS FROM SOLAR PHOTOVOLTAIC PROJECTS

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December 17, 2012

ACKNOWLEDGEMENTS

The study team would like to thank the owners and managers of the four project sites for participating in this study and their cooperation in gaining access to the sites, operational data, and system specifications.

We would also like to thank Bram Claeys of the Massachusetts Department of Energy Resources as well as Elizabeth Kennedy and Peter McPhee of the Massachusetts Clean Energy Center for their thorough and insightful review of this study.

EXECUTIVE SUMMARY

Sound pressure level and electromagnetic field (EMF) measurements were made at three utility-scale sites with solar photovoltaic (PV) arrays with a capacity range of 1,000 to 3,500 kW (DC at STC) under a full-load condition (sunny skies and the sun at an approximate 40° azimuth). Measurements were taken at set distances from the inverter pads and along the fenced boundary that encloses the PV array. Measurements were also made at set distances back from the fenced boundary. Broadband and 1/3-octave band sound levels were measured, along with the time variation of equipment sound levels.

EMF measurements were also made at one residential PV installation with a capacity of 8.6 kW under a partial-load condition. PV array operation is related to the intensity of solar insolation. Less sunshine results in lower sound and EMF levels from the equipment, and no sound or EMF is produced at night when no power is produced. A description of acoustic terms and metrics is provided in Appendix A, and EMF terms and metrics are presented in Appendix B. These appendices provide useful information for interpreting the results in this report and placing them in context, relative to other sound and EMF sources.

Sound levels along the fenced boundary of the PV arrays were generally at background levels, though a faint inverter hum could be heard at some locations. Any sound from the PV array and equipment was inaudible at set back distances of 50 to 150 feet from the boundary. Average L_{eq} sound levels at a distance of 10 feet from the inverter face varied over the range of 48 dBA to 61 dBA for Site 2 and Site 3 Inverters[1], and were higher in the range of 59 to 72 dBA for Site 1 Inverters. Along the axis perpendicular to the plane of the inverter face and at distances of 10 to 30 feet, sound levels were 4 to 13 dBA higher compared to levels at the same distance along the axis parallel to the inverter face. At 150 feet from the inverter pad, sound levels approached background levels. Sound level measurements generally followed the hemispherical wave spreading law (-6 dB per doubling of distance).

The time domain analysis reveals that 0.1-second L_{eq} sound levels at a distance of 10 feet from an inverter pad generally varied over a range of 2 to 6 dBA, and no recurring pattern in the rise and fall of the inverter sound levels with time was detected. The passage of clouds across the face of the sun caused cooling fans in the inverters to briefly turn off and sound levels to drop 4 dBA.

[1] The same make of inverters were used at Sites 2 and 3.

The 1/3-octave band frequency spectrum of inverter sound at the close distance of 10 feet shows energy peaks in several mid-frequency and high-frequency bands, depending on the inverter model. Tonal sound was found to occur in harmonic pairs: 63/125 Hz; 315/630 Hz; 3,150/6,300 Hz; and 5,000/10,000 Hz. The high frequency peaks produce the characteristic "ringing noise" or high-frequency buzz heard when one stands close to an operating inverter. The tonal sound was not, however, audible at distances of 50 to 150 feet beyond the PV array boundary, and these tonal peaks do not appear in the background sound spectrum. All low-frequency sound from the inverters below 40 Hz is inaudible, at all distances.

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has a recommended electric field level exposure limit of 4,200 Volts/meter (V/m) for the general public. At the utility scale sites, electric field levels along the fenced PV array boundary, and at the locations set back 50 to 150 feet from the boundary, were not elevated above background levels (< 5 V/m). Electric fields near the inverters were also not elevated above background levels (< 5 V/m). At the residential site, indoor electric fields in the rooms closest to the roof-mounted panels and at locations near the inverters were not elevated above background levels (< 5 V/m).

The International Commission on Non-Ionizing Radiation Protection has a recommended magnetic field level exposure limit of 833 milli-Gauss (mG) for the general public. At the utility scale sites, magnetic field levels along the fenced PV array boundary were in the very low range of 0.2 to 0.4 mG. Magnetic field levels at the locations 50 to 150 feet from the fenced array boundary were not elevated above background levels (<0.2 mG). There are significant magnetic fields at locations a few feet from these utility-scale inverters, in the range of 150 to 500 mG. At a distance of 150 feet from the inverters, these fields drop back to very low levels of 0.5 mG or less, and in many cases to background levels (<0.2 mG). The variation of magnetic field with distance generally shows the field strength is proportional to the inverse cube of the distance from equipment.

At the residential site, indoor magnetic field levels in the rooms closest to the roof-mounted panels were in the low range of 0.2 to 1.4 mG. There are low-level magnetic fields at locations a few feet from the inverters, in the range of 6 to 10 mG. At a distance of no more than 9 feet from the inverters, these fields dropped back to the background level at this residential site of 0.2 mG. Due to the relatively high background level in the residential site basement where the inverters were housed, the relationship of magnetic field strength to distance from the inverters could not be discerned.

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1.0 INTRODUCTION

The goal of this study is to conduct measurements at several ground-mounted PV arrays in Massachusetts to determine the sound pressure levels and electromagnetic field (EMF) levels generated by PV arrays and the equipment pads holding inverters and small transformers. This information will be used to inform local decision-makers and the public about the acoustic and EMF levels in the vicinity of PV projects.

Measurements were made at three utility-scale sites having PV arrays with a capacity range of 1,000 to 3,500 kW (DC at STC), with weather conditions consisting of sunny skies and the sun at approximately 40° azimuth. Measurements were also made at one residential[2] PV installation with a capacity of 8.6 kW under a partial-load condition. Sound level and EMF data were collected at set distances from the inverter pads and along the fenced boundary of the PV array. Measurements were also made at set distances back from the fenced boundary. Broadband and 1/3-octave band sound levels were measured, along with the time variation of equipment sound levels. Figure 1 shows a schematic map of a typical utility scale PV array containing four inverter pads and a fenced boundary. The orange stars show typical measurement locations around the fenced boundary of the array and at fixed set back distances of 50 feet, 100 feet, and 150 feet from the boundary. The green stars represent typical measurement locations at three set back distances from inverters on two of the equipment pads. At each equipment pad that was sampled, sound level measurements were made in two directions: along an axis parallel to the inverter face and along an axis perpendicular to the inverter face. Figure 2 illustrates a sound meter setup along the axis perpendicular to (90° from) an inverter face.

Section 2.0 of this report describes the measurement methods and locations, while Section 3.0 presents the measurement results in detail for the four sites. Study conclusions are given in Section 4.0. A description of acoustic terms and metrics is provided in Appendix A, and EMF terms and metrics are presented in Appendix B. These appendices provide useful information for interpreting the results in this report and placing them in context, relative to other sound and EMF sources.

[2] Only EMF measurements were made at the residential site.

Figure 1. Schematic Map of Sound and EMF Measurement Locations at a Solar Photovoltaic (PV) Array

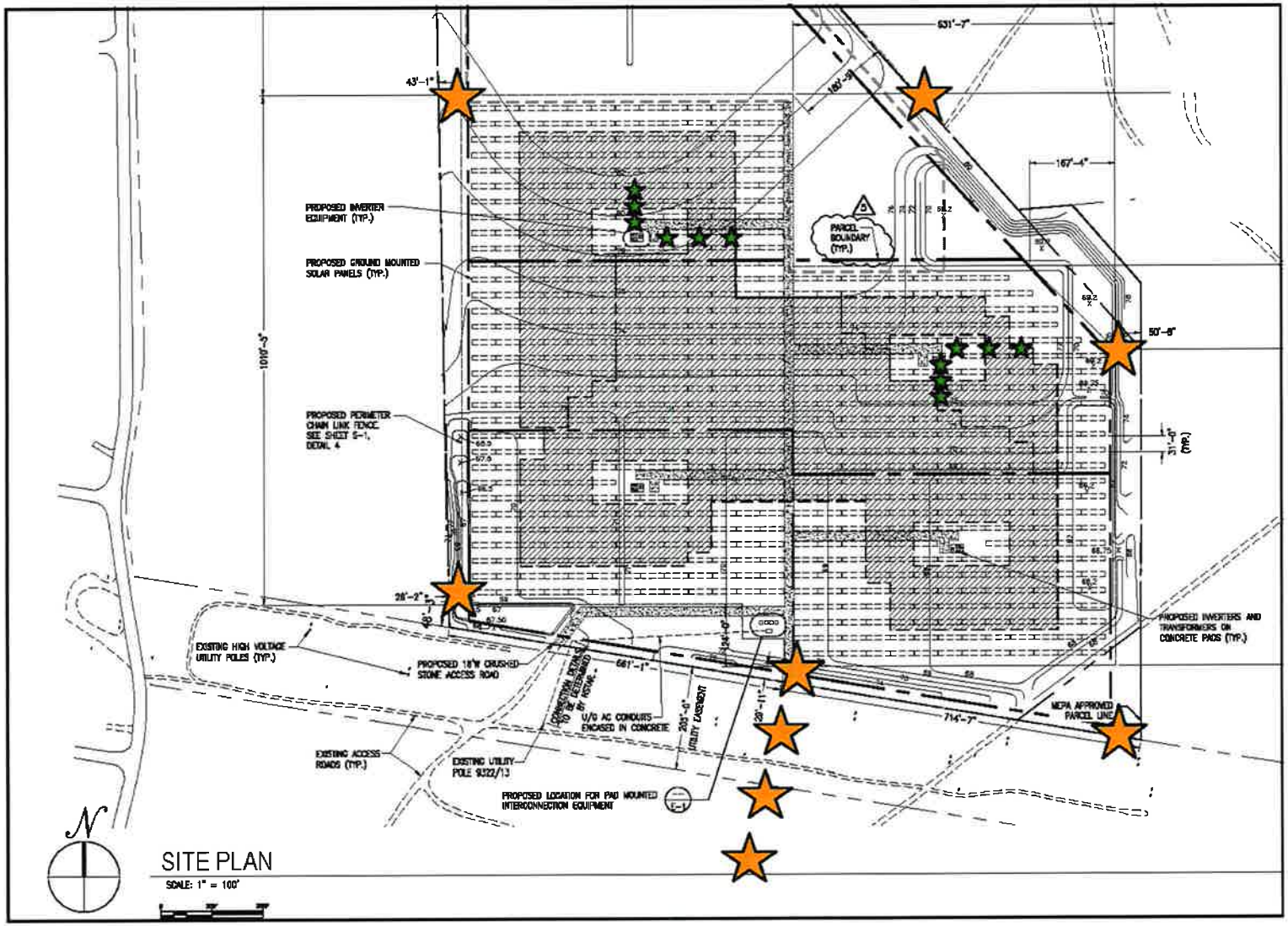


Figure 2. Sound Level Meter on the Axis Perpendicular to the Face of an Inverter at a Solar Photovoltaic (PV) Array

2.0 MEASUREMENT METHODS AND LOCATIONS

Sound pressure and EMF levels were measured along the fenced boundary of each PV array, at three set back distances from the boundary, and at fixed distances from equipment pads housing inverters and transformers (see Figures 1 and 2). Sound levels were measured with a tripod-mounted ANSI Type 1 sound meter, a Bruel & Kjaer Model 2250 meter, equipped with a large 7-inch ACO-Pacific WS7-80T 175 mm (7-inch) wind screen that is oversize and specially designed to screen out wind flow noise. An experimental study of wind-induced noise and windscreen attenuation effects by Hessler[3] found that the WS7-80T windscreen keeps wind-induced noise at the infrasound frequency band of 16 Hz to no more than 42 dB for moderate across-the–microphone wind speeds. That minimal level of wind-induced noise is 8 to 20 dB below the 16-Hz levels measured in this study.

The B&K Model 2250 measures 1/3-octave bands down to 6.3 Hz, well into the infrasonic range, and up to 20,000 Hz, the upper threshold of human hearing. The sound meter first recorded short-term (1-minute L_{eq} and L_{90}) broadband sound levels (in A-weighted decibels, dBA) at the established survey points. Then the sound meter was placed at the nearest measurement distance to each equipment pad to record a 10-minute time series of broadband and 1/3-octave band L_{eq} sound levels (in decibels, dB) at 0.1-second intervals. The L_{90} sound level removes intermittent noise and thus is lower than the L_{eq} sound level in the tables of results provided in Section 3.

EMF levels of both the magnetic field (in milliGauss, mG) and the electric field (in Volts/meter, V/m) were measured using a pair of Trifield Model 100XE EMF Meters. These instruments perform three-axis sampling simultaneously, enabling rapid survey of an area. The Trifield meters have a range for magnetic fields of 0.2 to 10,000 mG, and for electric fields from 5 to 1,000 V/m. EMF measurements were taken at the same survey points as the sound level measurements.

Measurements were made along the fenced boundary around each PV array at four to six evenly-spaced locations (depending on the size of the array), and at three additional locations set back 50 feet, 100 feet, and 150 feet from the boundary. At each equipment pad that was sampled, sound level

[3] Hessler, G., Hessler, D., Brandstatt, P., and Bay, K., "Experimental study to determine wind-induced noise and windscreen attenuation effects on microphone response for environmental wind turbine and other applications", Noise Control Eng. J., 56(4), 2008.

measurements were made in two directions: parallel to the inverter face, and perpendicular to the equipment face. The closest sound monitoring location was selected at a distance "1X" where the inverter or transformer sound was clearly audible above background levels. The closest EMF monitoring location was selected at a distance "1X" where magnetic field levels were approximately 500 mG, a level that is below the ICNIRP-recommended[4] human exposure limit of 833 mG (see Appendix B). Additional sampling points were then placed at distances[5] of 2X, 3X, and at 150 feet from the equipment pad, in the two orthogonal directions. There were a total of eight monitoring locations for each equipment pad, and seven to nine locations for the PV array boundary.

Measurements were made on October 11, 17, 22 and 26, 2012 around 12:30 p.m. EDT, the time of peak solar azimuth, and only on days for which clear skies were forecast to maximize solar insolation to the PV array. The peak solar azimuth in southern Massachusetts was approximately 40° azimuth on these dates. Consistent with standard industry practice, background levels of sound and EMF were measured at representative sites outside the fenced boundary of the PV array and far enough away to not be influenced by it or any other significant nearby source. The background levels presented for each site were made at distances of 50 feet, 100 feet, and 150 feet from the fenced boundary around the PV array (see Figure 1).

[4] International Commission on Non-Ionizing Radiation Protection.

[5] Location 2X is twice the distance from the equipment as location 1X; Location 3X is three times that distance.

3.0 MEASUREMENT RESULTS

Sound and EMF measurements were made at the following four PV arrays, presented in the following sections:

Site 1 – Achusnet ADM, Wareham, MA
Site 2 – Southborough Solar, Southborough, MA
Site 3 – Norfolk Solar, Norfolk, MA
Site 4 – Residential PV array owned by Massachusetts Audubon Society, Sharon, MA

3.1 Site 1 – Achusnet ADM

Facility Location:	27 Charlotte Furnace Road, Wareham, MA
Facility Owner:	Borrego Solar Systems, Inc.
System Capacity:	3,500 kW
Power Output During Monitoring:	3,500 kW
No. & Size Inverters:	(7) 500-kW inverters
Date Measured:	Thursday October 11, 2012
Cloud Cover:	0%
Winds:	West 10-12 mph
Ground:	Open area between cranberry bogs, no buildings or vegetation.
Background Sound:	Mean value L_{eq} of 46.4 dBA (range of 45.6 to 47.0 dBA). Mean value of L_{90} 43.9 dBA (range of 41.6 to 45.4 dBA). Sources included highway traffic on I-495 (to the south), earthmoving equipment to the east, birds and other natural sounds.
Background EMF:	None (< 0.2 mG and < 5 V/m) except along southern boundary from hi-voltage power lines overhead, and near the eastern boundary from low-voltage power lines overhead.

The solar photovoltaic array is in a flat area between cranberry bogs east of Charlotte Furnace Road in Wareham and the boundary of the array is fenced. The surrounding area has no buildings or vegetation. There are four equipment pads within the PV array, each housing one or two inverters. Measurements were made at two equipment pads: 1) the Northwest Pad, which contains two inverters and a small transformer, and 2) the Northeast Pad, which has one inverter and a small transformer. The sound and EMF measurements made at Site 1 are summarized in Tables 1 through 3. Figures 3 and 4 present a time series graph of 0.1-second L_{eq} sound levels at the nearest measurement location

(1X) for the Northwest and Northeast Equipment Pads, while Figure 5 provides the corresponding 1/3-octave band spectra for the sound level measurements at those same locations along with the spectrum for background sound levels.

Sound Levels

Background sound levels varied over time and space across the site. Highway traffic noise was the primary background sound source and higher levels were measured for locations on the south side of the site closer to the highway. Variable background sound was also produced by trucking activity to the east of the PV array, where sand excavated during the PV array's construction and stored in large piles was being loaded with heavy equipment into dump trucks and hauled away. Background sound levels varied over a range of 6 dBA. Background mean value L_{eq} and L_{90} levels were 46.4 dBA and 43.9 dBA, respectively. The PV array was inaudible outside of the fenced boundary, and was also inaudible everywhere along the boundary except at the North East boundary location where a faint inverter hum could be heard. Broadband sound levels at the locations set back 50 to 150 feet from the boundary are not elevated above background levels.

L_{eq} sound levels at a distance of 10 feet from the inverter face on the North West Pad (which holds two 500-kW inverters) were 68.6 to 72.7 dBA and at the same distance from the North East Pad (which holds only one 500-kW inverter) were lower at 59.8 to 66.0 dBA. Along the axis perpendicular to the inverter face measured sound levels were 4 to 6 dBA higher than at the same distance along the axis parallel to the inverter face. The sound levels generally declined with distance following the hemispherical wave spreading law (approximately -6 dB per doubling of distance) and at a distance of 150 feet all inverter sounds approached background sound levels. Due to the layout of the solar panels, the measurements made perpendicular to the inverter face and at a distance of 150 feet were blocked from a clear line of sight to the inverter pad by many rows of solar panels, which acted as sound barriers.

The time domain analysis presented in Figures 3 and 4 reveal that 0.1-second L_{eq} sound levels at the close distance of 10 feet generally varied 3 to 4 dBA at the North West Pad and 2 to 3 dBA at the North East Pad. The graphs show no recurring pattern in the rise and fall of the inverter sound levels

over the measurement period of ten minutes. The inverters registered full 500-kW capacity during both 10-minute monitoring periods.

The frequency spectrum of equipment sound at the close distance of 10 feet (Figure 5) shows energy peaks in four 1/3-octave bands, which are most pronounced for the North West Pad: 315 Hz, 630 Hz, 3,150 Hz, and 6,300 Hz. The two higher frequency peaks produce the characteristic "ringing noise" or high-frequency buzz heard when one stands close to an operating inverter. The second frequency peak in each pair is a first-harmonic tone (6,300 Hz being twice the frequency of 3,150 Hz). The tonal sound exhibited by Figure 5 is not, however, audible at distances of 50 to 150 feet beyond the PV array boundary, and these tonal peaks do not appear in the background sound spectrum shown in Figure 5. The dashed line in Figure 5 is the ISO 226 hearing threshold and it reveals that low-frequency sound from the inverters below 40 Hz is inaudible, even at a close distance. The background sound spectrum is smooth except for a broad peak around 800 Hz caused by distant highway traffic noise and a peak at 8,000 Hz that represents song birds.

Electric Fields

Electric field levels along the PV array boundary, and at the locations set back 50 to 150 feet from the boundary, are not elevated above background levels (< 5 V/m). The one measurement at 5.0 V/m in Table 1 was caused by the field around a nearby low-voltage power line overhead. Electric fields near the inverters are also not elevated above background levels (< 5 V/m). The one measurement at 10.0 V/m in Table 3 was caused by the meter being close to the front face of a solar panel at the 150-foot set back distance.

Magnetic Fields

Magnetic field levels along the PV array boundary and 50 feet from the boundary were in the very low range of 0.2 to 0.3 mG, except at the southern end of the boundary that is close to overhead high-voltage power lines, owned by the local utility and not connected to the project, where levels of 0.7 to 3 mG were measured, caused by those hi-voltage power lines. Magnetic field levels at the location 100 feet from the boundary were elevated by a low-voltage power line overhead. At 150 feet from the boundary, the magnetic field is not elevated above background levels (<0.2 mG).

Table 3 reveals that there are significant magnetic fields at locations a few feet from inverters, around 500 mG. These levels drop back to 0.2 to 0.5 mG at distances of 150 feet from the inverters. The variation of magnetic field with distance shown in Table 3 generally shows the field strength is proportional to the inverse cube of the distance from equipment. Following that law, the magnetic field at 5 feet of 500 mG should decline to 0.02 mG (< 0.2 mG) at 150 feet. The measured levels of 0.1 to 0.5 mG at 150 feet listed in Table 3 are likely caused by small-scale magnetic fields setup around the PV cells and connecting cables near the sampling locations.

TABLE 1

SOUND AND EMF LEVELS MEASURED AT SITE 1
PV ARRAY BOUNDARY

Boundary Location	L_{90} Level (dBA)	L_{eq} Level (dBA)	Magnetic Field (mG)	Electric Field (V/m)
North West Boundary	39.1	42.5	< 0.2	< 5
South West Boundary	43.6	44.7	1.8	< 5
South Center Boundary	44.8	48.1	3.0	< 5
South East Boundary	44.0	45.6	0.7	< 5
North East Boundary	42.2	43.9	< 0.2	< 5
North Center Boundary	43.4	44.3	0.3	< 5
Background Mean Values	43.9	46.4	< 0.2	< 5
Set back 50 feet from Boundary	41.6	47.0	0.2	< 5
Set back 100 feet from Boundary	45.4	46.7	0.4	5.0
Set back 150 feet from Boundary	44.7	45.6	< 0.2	< 5

TABLE 2

SOUND LEVELS MEASURED AT SITE 1
EQUIPMENT PADS

Equipment Pad / Direction / Distance	L_{90} Level (dBA)	L_{eq} Level (dBA)
North West Pad / Parallel to Inverter Face / 10 feet	67.6	68.6
North West Pad / Parallel to Inverter Face / 20 feet	61.8	63.1
North West Pad / Parallel to Inverter Face / 30 feet	58.8	60.6
North West Pad / Parallel to Inverter Face / 150 feet	45.2	46.0
North West Pad / Perpendicular to Inverter Face / 10 feet	71.8	72.7
North West Pad / Perpendicular to Inverter Face / 20 feet	63.5	64.8
North West Pad / Perpendicular to Inverter Face / 30 feet	59.5	62.3
North West Pad / Perpendicular to Inverter Face / 150 feet	41.8	43.0
North East Pad / Parallel to Inverter Face / 10 feet	59.1	59.8
North East Pad / Parallel to Inverter Face / 20 feet	55.4	56.2
North East Pad / Parallel to Inverter Face / 30 feet	54.8	55.7
North East Pad / Parallel to Inverter Face / 150 feet	43.4	44.0
North East Pad / Perpendicular to Inverter Face / 10 feet	65.5	66.0
North East Pad / Perpendicular to Inverter Face / 20 feet	59.8	60.2
North East Pad / Perpendicular to Inverter Face / 30 feet	56.3	56.9
North East Pad / Perpendicular to Inverter Face / 150 feet	41.0	43.6

TABLE 3

EMF LEVELS MEASURED AT SITE 1
EQUIPMENT PADS

Equipment Pad / Direction / Distance	Magnetic Field (mG)	Electric Field (V/m)
North West Pad / Parallel to Inverter Face / 5 feet 3 inches	500	< 5
North West Pad / Parallel to Inverter Face / 10 feet 6 inches	10.5	< 5
North West Pad / Parallel to Inverter Face / 15 feet 9 inches	2.75	< 5
North West Pad / Parallel to Inverter Face / 150 feet	0.2	< 5
North West Pad / Perpendicular to Inverter Face / 4 feet	500	< 5
North West Pad / Perpendicular to Inverter Face / 8 feet	200	< 5
North West Pad / Perpendicular to Inverter Face / 12 feet	6.5	< 5
North West Pad / Perpendicular to Inverter Face / 150 feet	0.5	< 5
North East Pad / Parallel to Inverter Face / 3 feet 10 inches	500	< 5
North East Pad / Parallel to Inverter Face / 7 feet 8 inches	30	< 5
North East Pad / Parallel to Inverter Face / 11 feet 10 inches	4.5	< 5
North East Pad / Parallel to Inverter Face / 150 feet	0.2	10.0
North East Pad / Perpendicular to Inverter Face / 7 feet 6 inches	500	< 5
North East Pad / Perpendicular to Inverter Face / 15 feet	10	< 5
North East Pad / Perpendicular to Inverter Face / 22 feet 6 inches	2.1	< 5
North East Pad / Perpendicular to Inverter Face / 150 feet	0.1	< 5

Figure 3. Time Variation of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pads for Site #1

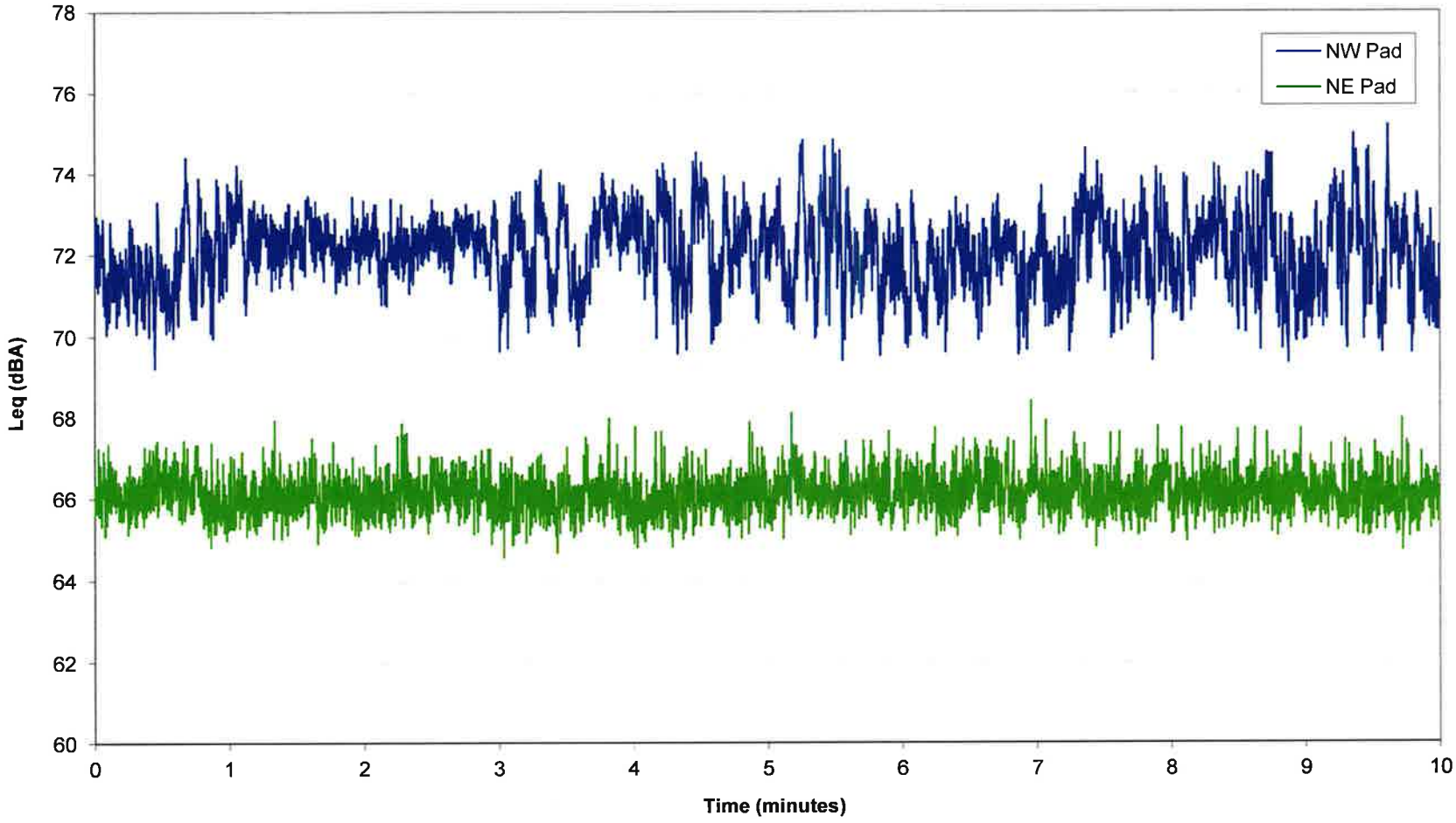


Figure 4. Time Variation of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pads for Site #1 - First 10 Seconds of Measurements

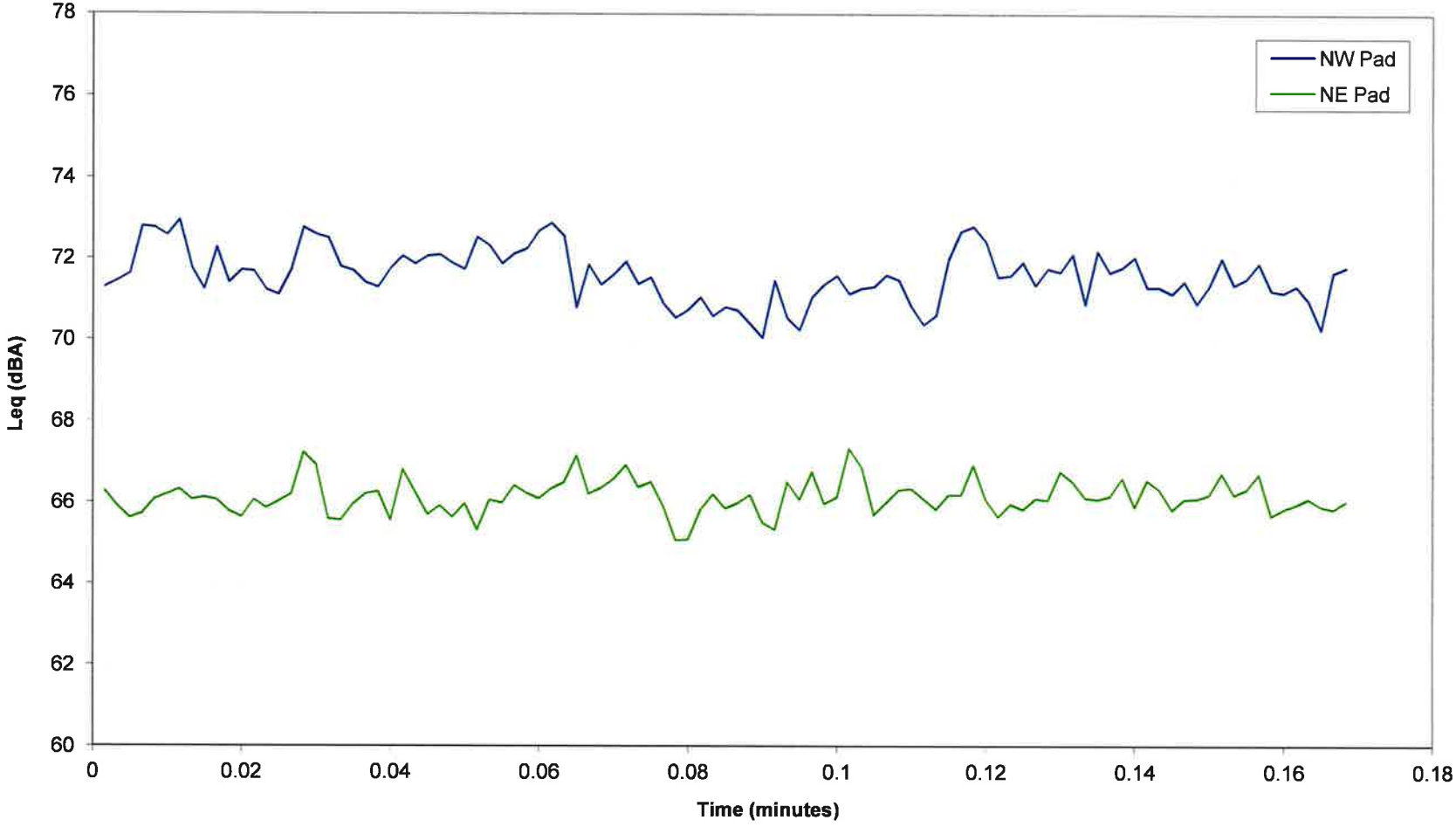
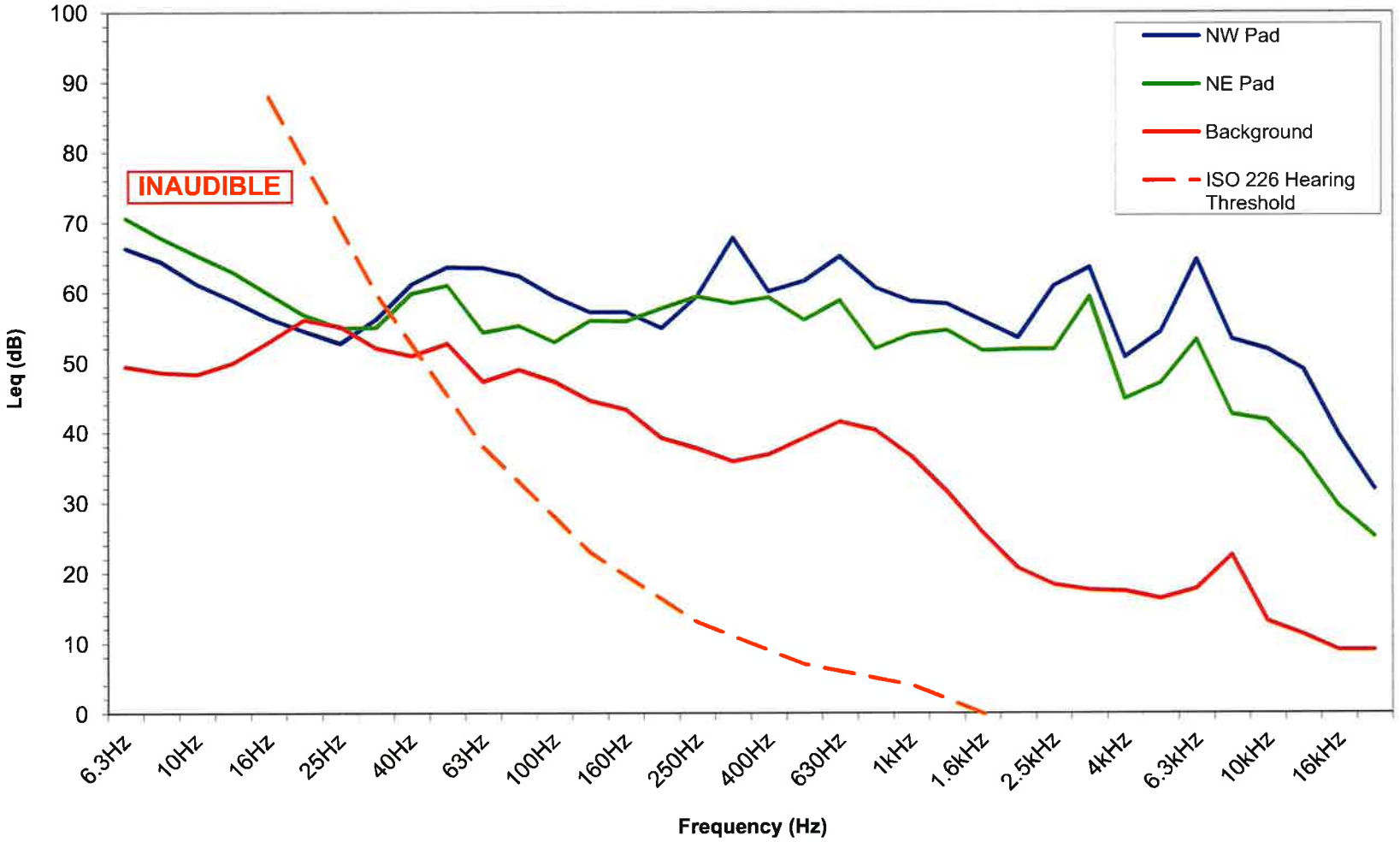


Figure 5. Frequency Spectrum of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pads for Site #1



3.2 Site 2 – Southborough Solar

Facility Location:	146 Cordaville Road, Southborough, MA
Facility Owner:	Southborough Solar, LLC
System Capacity:	1,000 kW
Power Output During Monitoring:	1,000 kW
No. & Size Inverters:	(2) 500-kW inverters
Date Measured:	Wednesday October 17, 2012
Cloud Cover:	5% (high, thin cirrus)
Winds:	Northwest 3-5 mph
Ground:	Wooded areas and wetlands surround the PV array, and a building is located to the south where the inverters are housed.
Background Sound:	Mean value L_{eq} of 53.1 dBA (range of 51.0 to 55.9 dBA). Mean value L_{90} of 49.6 dBA (range of 48.6 to 50.3 dBA). Sources included roadway traffic on Cordaville Road (to the west) and Route 9 (to the north) and natural sounds.
Background EMF:	None (< 0.2 mG and < 5 V/m).

The solar photovoltaic array is in a cleared area of land east of Cordaville Road in Southborough and the boundary of the array is fenced. The array is surrounded by wetlands and woods. The two inverters are not within the PV array; instead they are located on a single pad at the southeast corner of the building that lies south of the PV array. Measurements were made at the one equipment pad housing the two inverters. Due to the close proximity of wetlands to the fenced boundary for the PV array, it was not possible to obtain measurements 50 to 150 feet from the boundary. Instead, measurements were taken 50 to 150 feet set back from the property boundary of the site near where the inverter pad is located. The sound and EMF measurements made at Site 2 are summarized in Tables 4 through 6. Figures 6 and 7 present a time series graph of 0.1-second L_{eq} sound levels at the nearest measurement location (1X) for the equipment pad, while Figure 8 provides the corresponding 1/3-octave band spectra for the sound level measurements at those same locations along with the spectrum for background sound levels.

Sound Levels

Background sound levels varied over time and space across the site, depending on the distance from Cordaville Road, which carries heavy traffic volumes. Roadway traffic noise was the primary background sound source and higher levels were measured for locations on the west side of the site closer to Cordaville Road. Background sound levels varied over a range of 5 to 7 dBA. The background mean value L_{eq} and L_{90} levels were 53.1 dBA and 49.6 dBA, respectively. The inverters

were inaudible at a distance of 50 feet outside of the site boundary. Broadband sound levels at the locations set back 50 to 150 feet from the boundary are not elevated above background levels.

L_{eq} sound levels at a distance of 10 feet from the inverter face on the equipment pad (which holds two 500-kW inverters) were 48.1 to 60.8 dBA. Along the axis perpendicular to the inverter face, measured sound levels were 10 to 13 dBA higher than at the same distance along the axis parallel to the inverter face. The sound levels did not follow the expected hemispherical wave spreading law (approximately -6 dB per doubling of distance) and declined at a lower rate with increasing distance due to the relatively high background sound levels from nearby roadway traffic. At a distance of 150 feet, all inverter sounds were below background sound levels.

The time domain analysis presented in Figures 6 and 7 reveal that 0.1-second L_{eq} sound levels at the close distance of 10 feet generally varied 5 to 6 dBA. The graphs show no recurring pattern in the rise and fall of the inverter sound levels over the measurement period of ten minutes. The rise and fall in inverter sound levels over several minutes is thought to be due to the passage of sheets of high thin cirrus clouds across the face of the sun during the measurements. The inverters registered full 500-kW capacity during both 10-minute monitoring periods.

The frequency spectrum of equipment sound at the close distance of 10 feet (Figure 8) shows energy peaks in two 1/3-octave bands: 5,000 and 10,000 Hz. These high frequency peaks produce the characteristic "ringing noise" or high-frequency buzz heard when one stands close to an operating inverter. The second frequency peak is a first-harmonic tone (10 kHz being twice the frequency of 5 kHz). The tonal sound exhibited by Figure 8 is not, however, audible at distances of 50 to 150 feet beyond the site boundary, and these tonal peaks do not appear in the background sound spectrum shown in Figure 8. The dashed line in Figure 8 is the ISO 226 hearing threshold and it reveals that low-frequency sound from the inverters below 40 Hz is inaudible, even at a close distance. The background sound spectrum declines smoothly with increasing frequency in the audible range except for a rise around 800 to 2,000 Hz caused by nearby roadway traffic noise.

Electric Fields

Electric field levels along the PV array boundary, and at the locations set back 50 to 150 feet from the site boundary, are not elevated above background levels (< 5 V/m).

Magnetic Fields

Magnetic field levels along the PV array boundary were in the very low range of 0.2 to 0.4 mG. Magnetic field levels at the locations 50 to 150 feet from the site boundary were not elevated above background levels (<0.2 mG).

Table 6 reveals that there are significant magnetic fields at locations a few feet from inverters, in the range of 200 to 500 mG. These levels drop back to background levels (<0.2 mG) at distances of 95 to 150 feet from the inverters. The variation of magnetic field with distance shown in Table 6 generally shows the field strength is proportional to the inverse cube of the distance from equipment.

TABLE 4

SOUND AND EMF LEVELS MEASURED AT SITE 2
PV ARRAY BOUNDARY

Boundary Location	L_{90} Level (dBA)	L_{eq} Level (dBA)	Magnetic Field (mG)	Electric Field (V/m)
North West Boundary	53.3	54.4	0.2	< 5
South West Boundary	52.4	54.4	0.2	< 5
South East Boundary	48.3	50.8	0.4	< 5
North East Boundary	46.8	49.8	< 0.2	< 5
Background Mean Values	49.6	53.1	< 0.2	< 5
Set back 50 feet from Boundary	50.3	52.3	< 0.2	< 5
Set back 100 feet from Boundary	49.9	55.9	< 0.2	< 5
Set back 150 feet from Boundary	48.6	51.0	< 0.2	< 5

TABLE 5

SOUND LEVELS MEASURED AT SITE 2
EQUIPMENT PAD

Equipment Pad / Direction / Distance	L_{90} Level (dBA)	L_{eq} Level (dBA)
Parallel to Inverter Face / 10 feet	46.7	48.1
Parallel to Inverter Face / 20 feet	44.8	46.2
Parallel to Inverter Face / 30 feet	44.3	45.6
Parallel to Inverter Face / 95 feet*	44.0	45.6
Perpendicular to Inverter Face / 10 feet	59.9	60.8
Perpendicular to Inverter Face / 20 feet	57.3	58.7
Perpendicular to Inverter Face / 30 feet	53.4	54.5
Perpendicular to Inverter Face / 150 feet	46.2	47.5

*Measurements could not be taken at 150 feet parallel to inverter face because of the close proximity of wetlands. Instead, a measurement was made at the farthest practical distance in that direction at 95 feet.

TABLE 6

EMF LEVELS MEASURED AT SITE 2
EQUIPMENT PAD

Equipment Pad / Direction / Distance	Magnetic Field (mG)	Electric Field (V/m)
Parallel to Inverter Face / 4 feet	200	< 5
Parallel to Inverter Face / 8 feet	10	< 5
Parallel to Inverter Face / 12 feet	0.8	< 5
Parallel to Inverter Face / 95 feet*	<0.2	< 5
Perpendicular to Inverter Face / 4 feet	500	< 5
Perpendicular to Inverter Face / 8 feet	25	< 5
Perpendicular to Inverter Face / 12 feet	4.5	< 5
Perpendicular to Inverter Face / 150 feet	<0.2	< 5

*Measurements could not be taken at 150 feet parallel to inverter face because of the close proximity of wetlands. Instead, a measurement was made at the farthest practical distance in that direction at 95 feet.

Figure 6. Time Variation of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pad for Site #2

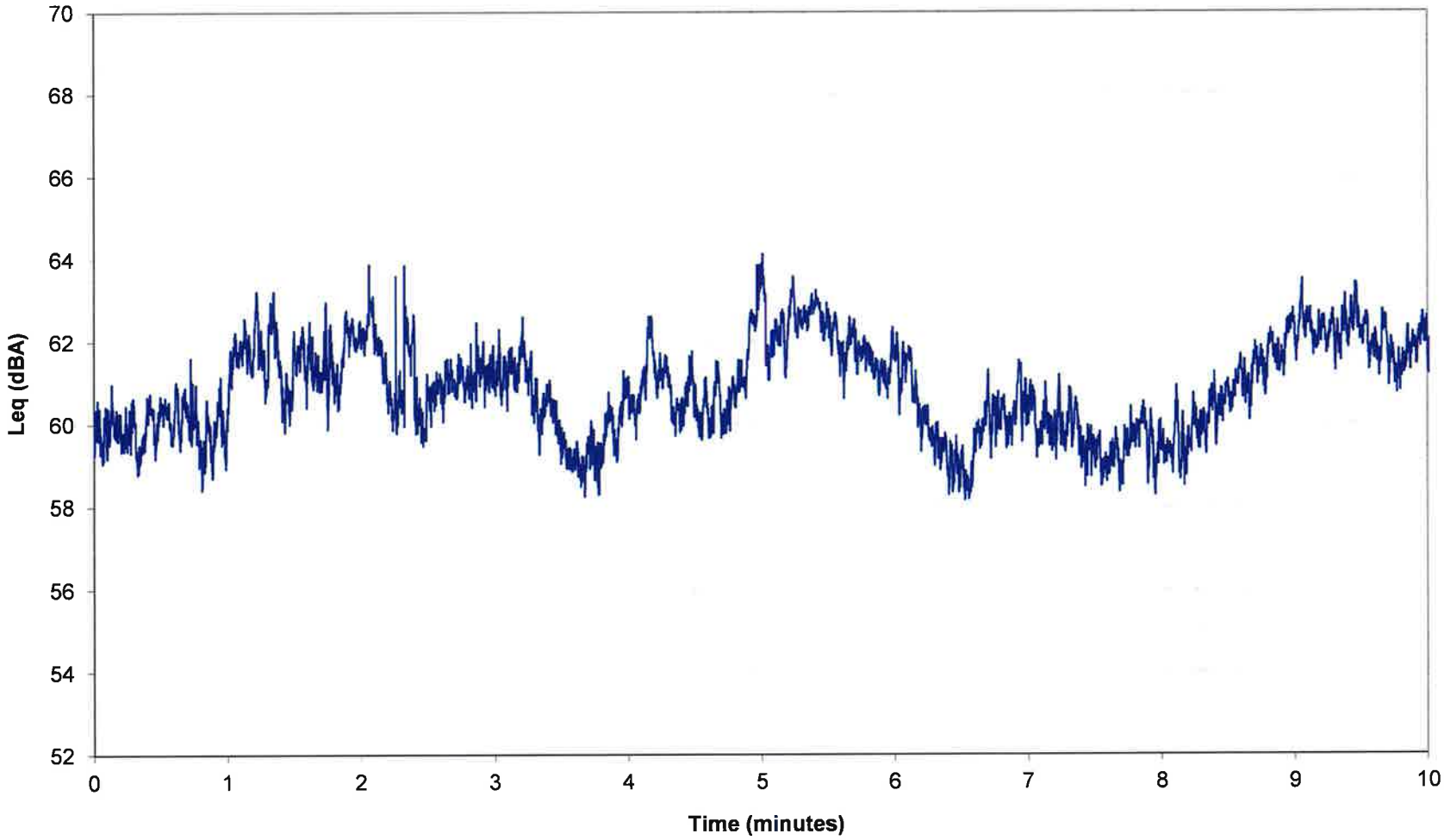


Figure 7. Time Variation of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pad for Site #2 - First 10 Seconds of Measurements

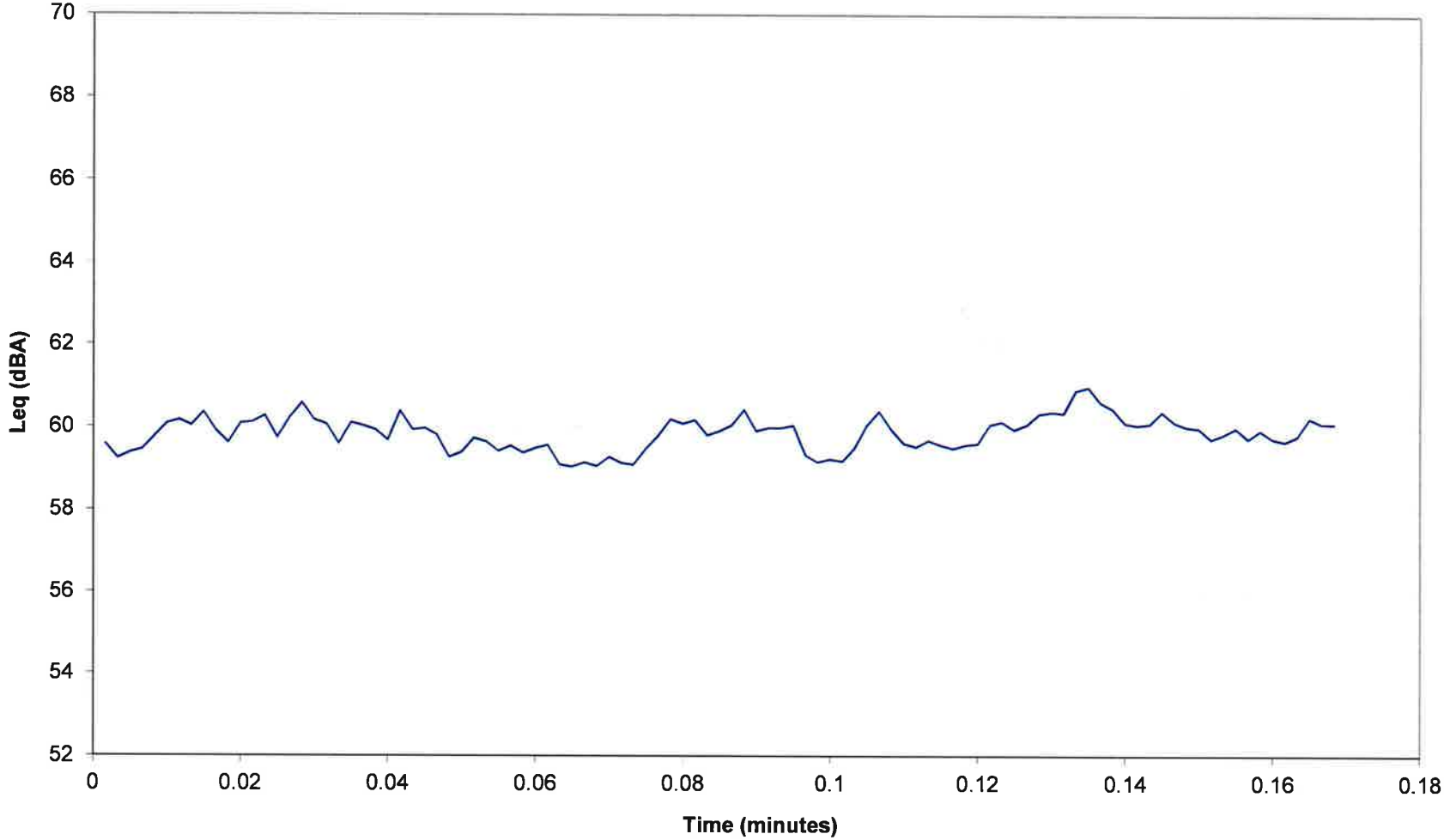
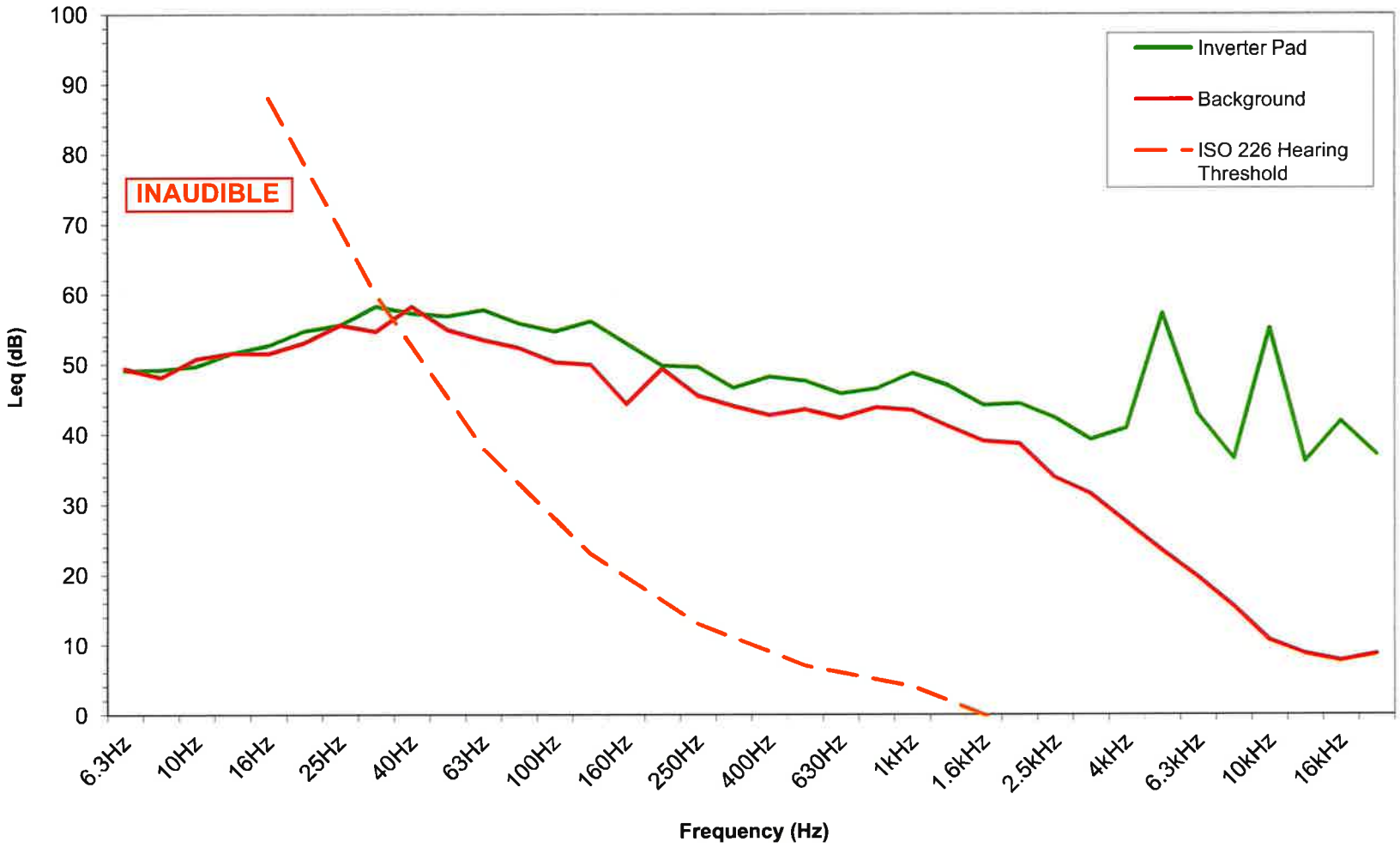


Figure 8. Frequency Spectrum of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pad at Site #2



3.3 Site 3 – Norfolk Solar

Facility Location:	33 Medway Branch Road, Norfolk, MA
Facility Owner:	Constellation Solar Massachusetts, LLC
System Capacity:	1,375 kW
Power Output During Monitoring:	1,200 to 1,375 kW
No. & Size Inverters:	(2) 500-kW inverters and (1) 375-kW inverter
Date Measured:	Monday October 22, 2012
Sky Cover:	10% (passing small cumulus clouds)
Winds:	West 10-12 mph
Ground:	One PV array sits high on top of the closed landfill with grass cover and no surrounding vegetation. The other, larger PV array is in a wooded area on relatively flat ground. Measurements were made at the larger PV array.
Background Sound:	Mean value L_{eq} of 45.3 dBA (range of 43.1 to 47.5 dBA). Mean value L_{90} of 42.5 dBA (range of 42.1 to 43.2 dBA). Sources included distant traffic noise and natural sounds.
Background EMF:	None (< 0.2 mG and < 5 V/m).

There are two solar photovoltaic arrays on the land of the Town of the Norfolk Department of Public Works. One array sits on top of a capped landfill and has a single equipment pad with one inverter. The second, and larger, array is in a cleared flat area east of the capped landfill and has a single equipment pad housing two inverters. The boundaries of the PV arrays are fenced. The surrounding area has only grass cover or low vegetation. Measurements were made at the larger PV array and at the equipment pad housing two inverters with a capacity of 875 kW. The sound and EMF measurements made at Site 3 are summarized in Tables 7 through 9. Figures 9 and 10 present a time series graph of 0.1-second L_{eq} sound levels at the nearest measurement location (1X) for the equipment pad, while Figure 11 provides the corresponding 1/3-octave band spectra for the sound level measurements at those same locations along with the spectrum for background sound levels.

Sound Levels

Background sound levels were fairly constant across the site and distant roadway traffic was the primary background sound source. The background mean value L_{eq} and L_{90} levels were 45.3 dBA and 42.5 dBA, respectively. The PV array was inaudible outside of the fenced boundary except at the South East boundary location where a faint inverter hum could be heard. Broadband sound levels at the locations set back 50 to 150 feet from the boundary are not elevated above background levels.

L_{eq} sound levels at a distance of 10 feet from the inverter face on the equipment pad (which holds two inverters) were 54.8 to 60.9 dBA. Along the axis perpendicular to the inverter face measured sound levels were 6 to 7 dBA higher than at the same distance along the axis parallel to the inverter face. The sound levels generally followed the expected hemispherical wave spreading law (approximately -6 dB per doubling of distance). At a distance of 150 feet, all inverter sounds were below background sound levels.

The time domain analysis presented in Figures 9 and 10 reveal that 0.1-second L_{eq} sound levels at the close distance of 10 feet generally varied 3 to 4 dBA. The graphs show no recurring pattern in the rise and fall of the inverter sound levels over the measurement period of ten minutes. Between 7 and 9 minutes into the 10-minute measurement, clouds passed over the face of the sun, power production dropped, and the inverter cooling fans turned off for a brief period, as shown by the abrupt 4 dBA drop in sound level in Figure 9.

The frequency spectrum of equipment sound at the close distance of 10 feet (Figure 11) shows energy peaks in four 1/3-octave bands: 63, 125, 5,000 and 10,000 Hz. The high frequency peaks produce the characteristic "ringing noise" or high-frequency buzz heard when one stands close to an operating inverter. The second frequency peak in each pair is a first-harmonic tone (10 kHz being twice the frequency of 5 kHz). The tonal sound exhibited by Figure 11 is not, however, audible at distances of 50 to 150 feet beyond the site boundary, and these tonal peaks do not appear in the background sound spectrum shown in Figure 11. The dashed line in Figure 11 is the ISO 226 hearing threshold and it reveals that low-frequency sound from the inverters below 40 Hz is inaudible, even at a close distance. The background sound spectrum declines smoothly with increasing frequency in the audible range except for a slight rise around 800 to 2,000 Hz caused by distant roadway traffic noise.

Electric Fields

Electric field levels along the PV array boundary, and at the locations set back 50 to 150 feet from the site boundary, are not elevated above background levels (< 5 V/m).

Magnetic Fields

Magnetic field levels along the PV array boundary were in the very low range, at or below 0.2 mG. Magnetic field levels at the locations 50 to 150 feet from the site boundary were not elevated above background levels (<0.2 mG).

Table 9 reveals that there are significant magnetic fields at locations a few feet from inverters, in the range of 150 to 500 mG. These levels drop back to levels of 0.4 mG in the perpendicular direction and to background levels (<0.2 mG) in the parallel direction at 150 feet from the inverters. The variation of magnetic field with distance shown in Table 9 generally shows the field strength is proportional to the inverse cube of the distance from equipment.

TABLE 7

SOUND AND EMF LEVELS MEASURED AT SITE 3
PV ARRAY BOUNDARY

Boundary Location	L_{90} Level (dBA)	L_{eq} Level (dBA)	Magnetic Field (mG)	Electric Field (V/m)
North West Boundary	46.2	48.3	< 0.2	< 5
South West Boundary	48.9	50.6	< 0.2	< 5
South East Boundary	43.3	44.3	0.2	< 5
North East Boundary	43.9	46.1	< 0.2	< 5
Background Mean Values	42.5	45.3	< 0.2	< 5
Set back 50 feet from Boundary	43.2	47.5	< 0.2	< 5
Set back 100 feet from Boundary	42.2	45.4	< 0.2	< 5
Set back 150 feet from Boundary	42.1	43.1	< 0.2	< 5

TABLE 8

SOUND LEVELS MEASURED AT SITE 3
EQUIPMENT PAD

Equipment Pad / Direction / Distance	L_{90} Level (dBA)	L_{eq} Level (dBA)
Perpendicular to Inverter Face / 10 feet	59.7	60.9
Perpendicular to Inverter Face / 20 feet	57.3	58.6
Perpendicular to Inverter Face / 30 feet	49.4	50.1
Perpendicular to Inverter Face / 150 feet	43.9	47.0
Parallel to Inverter Face / 10 feet	53.9	54.8
Parallel to Inverter Face / 20 feet	50.6	51.3
Parallel to Inverter Face / 30 feet	45.5	48.0
Parallel to Inverter Face / 150 feet	41.8	43.7

TABLE 9

EMF LEVELS MEASURED AT SITE 3
EQUIPMENT PAD

Equipment Pad / Direction / Distance	Magnetic Field (mG)	Electric Field (V/m)
Parallel to Inverter Face / 3 feet	150	< 5
Parallel to Inverter Face / 6 feet	10	< 5
Parallel to Inverter Face / 9 feet	5	< 5
Parallel to Inverter Face / 150 feet	< 0.2	< 5
Perpendicular to Inverter Face / 3 feet	500	< 5
Perpendicular to Inverter Face / 6 feet	200	< 5
Perpendicular to Inverter Face / 9 feet	80	< 5
Perpendicular to Inverter Face / 150 feet	0.4	< 5

Figure 9. Time Variation of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pad for Site #3

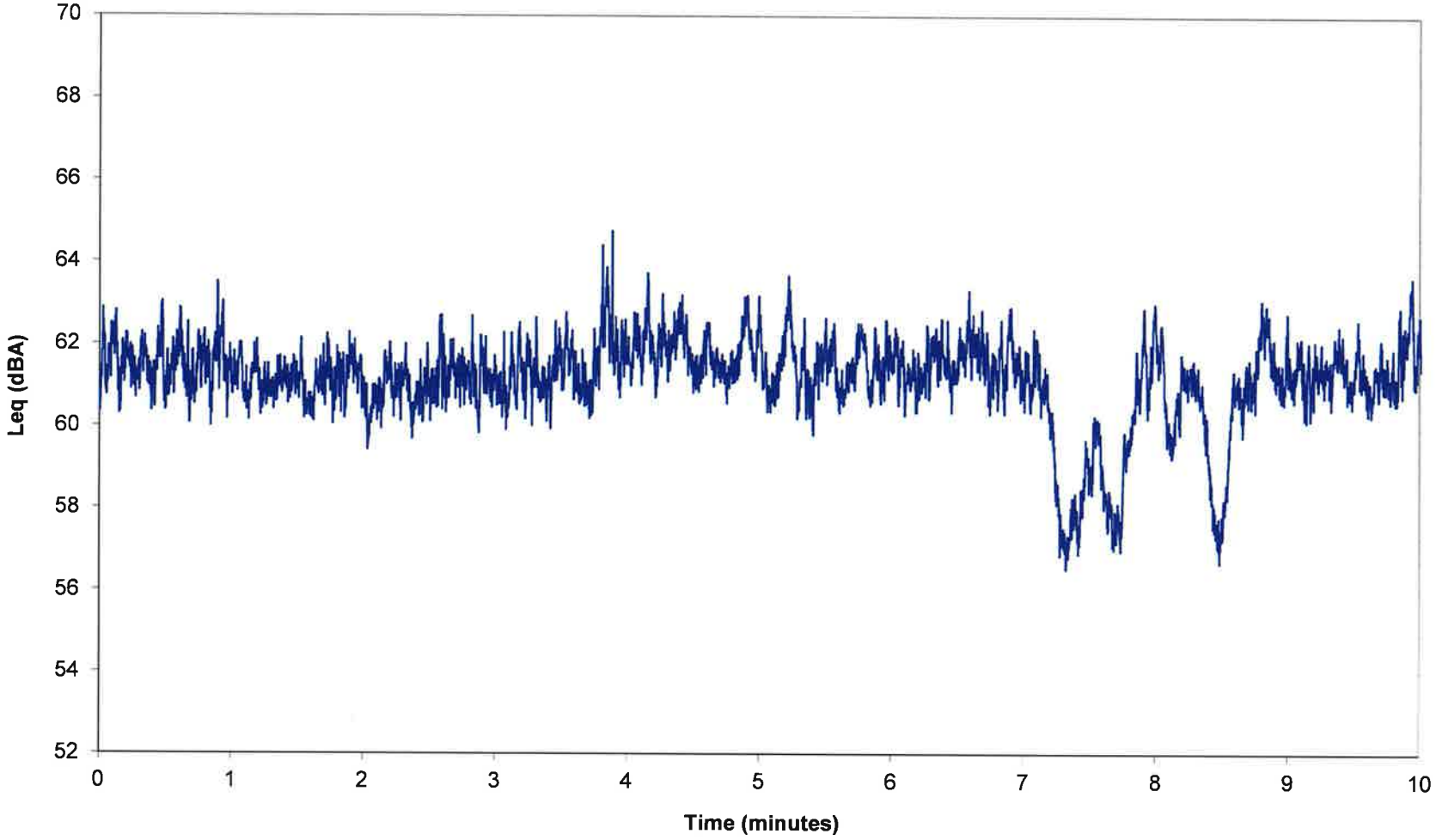


Figure 10. Time Variation of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pad for Site #3 - First 10 Seconds of Measurements

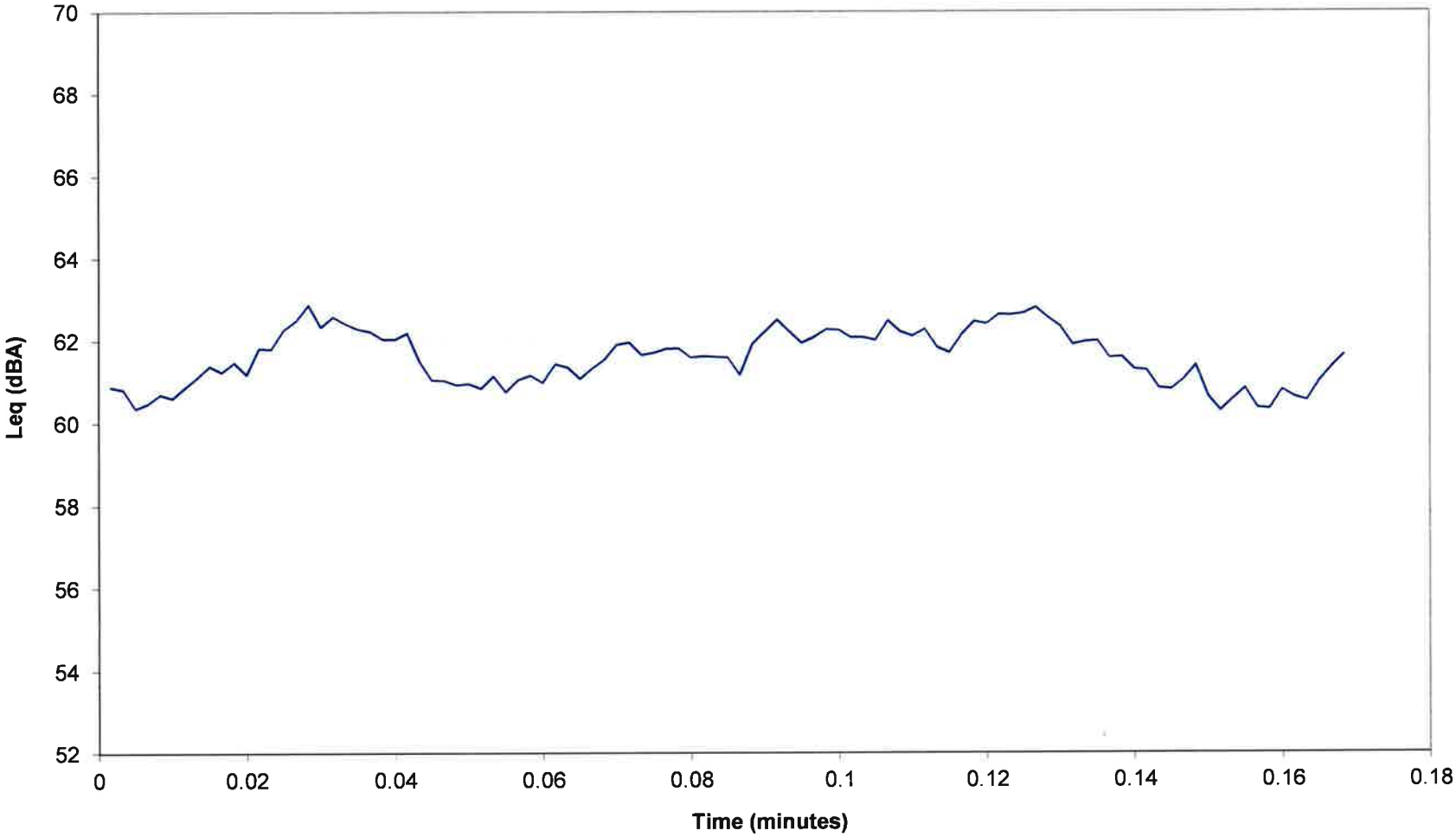
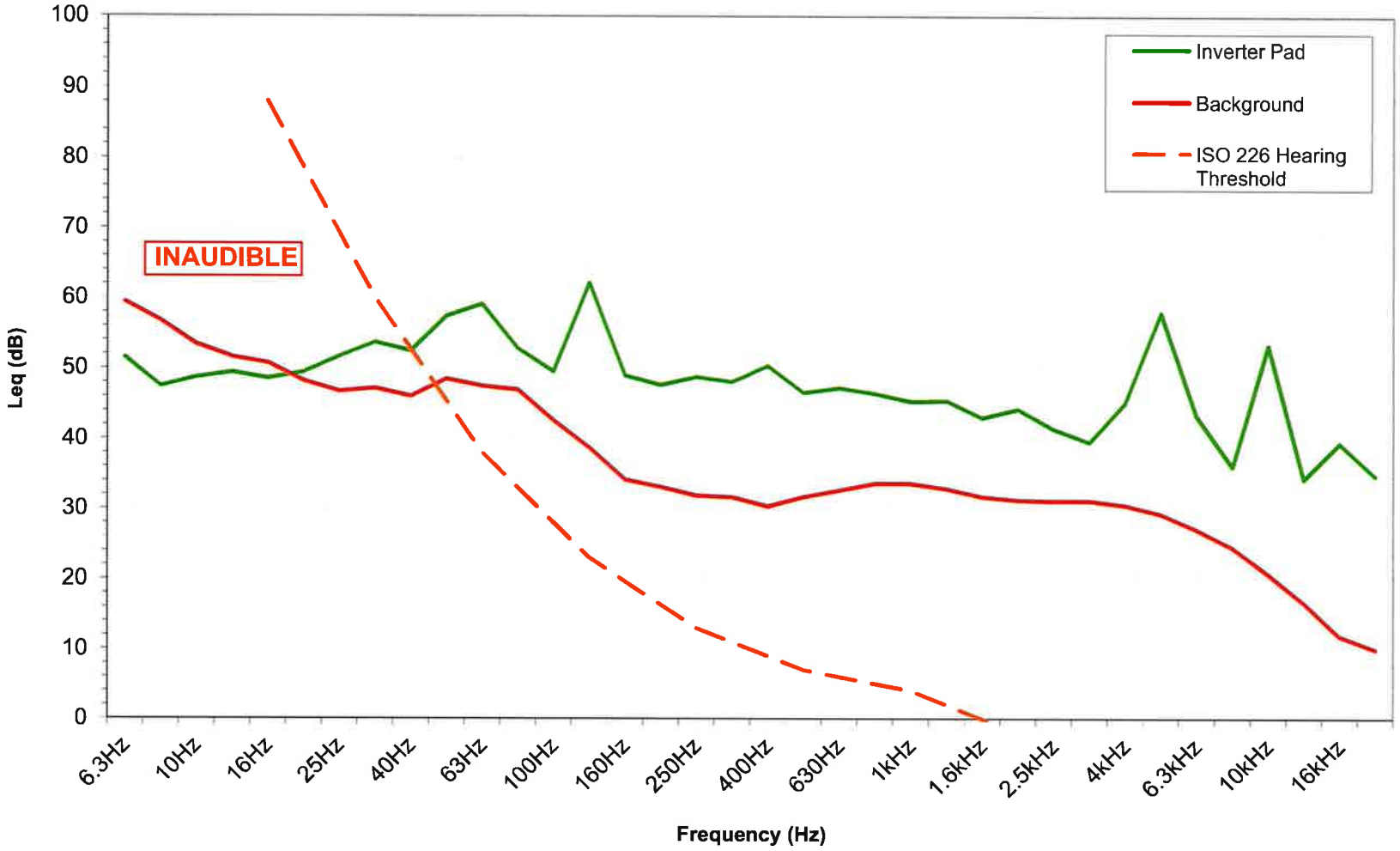


Figure 11. Frequency Spectrum of Sound Levels (Leq) at a Distance of 10 Feet from the Inverter Pad at Site #3



3.4 Site 4 – Residential Solar at Mass. Audubon Society in Sharon

Facility Location:	Moose Hill Sanctuary, 293 Moose Hill Road, Sharon, MA
Facility Owner:	Massachusetts Audubon Society
System Capacity:	8.6 kW
Power Output During Monitoring:	4.2 kW
No. & Size Inverters:	(1) 5-kW inverter and (1) 3.6-kW inverter
Date Measured:	Friday October 26, 2012
Sky Cover:	50% (scattered clouds)
Winds:	Northwest 0-3 mph
Ground:	(42) Evergreen solar panels are mounted on the pitched roof of the two-story building and face south. The ground around the site is cleared and opens to the south with surrounding woods at a distance.
Background EMF:	None in occupied rooms (< 0.2 mG and < 5 V/m). In the basement storage space where the inverters were housed, a background magnetic field of 2 mG was present and the background electric field was < 5 V/m.

EMF measurements were made inside the headquarters building of the Massachusetts Audubon Moose Hill Sanctuary. No sound measurements were made for this residential sized solar installation. The EMF measurements were made in rooms on the second floor of the building, the closest locations occupants have to the roof-mounted panels. Measurements were also made at the inverters inside the basement of the building, in a space not readily accessible to the public. The EMF measurements made at Site 4 are summarized in Tables 10 and 11.

Electric Fields

Electric field levels in the rooms on the top floor, nearest the roof-mounted solar panels are not elevated above background levels (< 5 V/m). In the basement, electric fields near the inverters (3 feet) are not elevated above background levels (< 5 V/m).

Magnetic Fields

Magnetic field levels in the rooms on the top floor, nearest the roof-mounted solar panels were in the very low range of 0.2 to 1.4 mG. Table 11 reveals that there are low-level magnetic fields at locations a few feet from inverters, around 6 to 10 mG. These levels dropped back to a floor of 2 mG at a distance of 6 to 9 feet from the inverters. Nearby electrical lines and other equipment in the basement created a background of 2 mG in the space where the inverters were housed.

TABLE 10

EMF LEVELS MEASURED INSIDE THE RESIDENTIAL BUILDING, TOP FLOOR AT SITE 4

Boundary Location	Magnetic Field (mG)	Electric Field (V/m)
North West Room	0.9	< 5
South West Room	1.4	< 5
South East Room	0.2	< 5
North East Room	0.5	< 5

TABLE 11

EMF LEVELS MEASURED INSIDE THE RESIDENTIAL BUILDING, BASEMENT AT SITE 4

Equipment Pad / Direction / Distance	Magnetic Field (mG)	Electric Field (V/m)
Parallel to Inverter Face / 3 feet	10	< 5
Parallel to Inverter Face / 6 feet	6	< 5
Parallel to Inverter Face / 9 feet	2	< 5
Parallel to Inverter Face / 15 feet	2	< 5
Perpendicular to Inverter Face / 3 feet	6	< 5
Perpendicular to Inverter Face / 6 feet	2	< 5
Perpendicular to Inverter Face / 9 feet	2	< 5
Perpendicular to Inverter Face / 15 feet	2	< 5

4.0 CONCLUSIONS

Sound pressure level and electromagnetic field (EMF) measurements were made at three utility-scale PV arrays with a capacity range of 1,000 to 3,500 kW under a full-load condition with sunny skies and the sun at approximately 40° azimuth. Measurements were taken at set distances from the inverter pads and along the fenced boundary of the PV array. Measurements were also made at set distances back from the boundary. Broadband and 1/3-octave band sound levels were measured, along with the time variation of sound levels from the equipment.

EMF Measurements were also made at one residential[6] PV installation with a capacity of 8.6 kW under a partial-load condition. PV array operation is related to the intensity of solar insolation. Less sunshine results in lower sound and EMF levels from the equipment, and no sound or EMF is produced at night when no power is produced. A description of acoustic terms and metrics is provided in Appendix A, and EMF terms and metrics are presented in Appendix B. These appendices provide useful information for interpreting the results in this report and placing them in context, relative to other sound and EMF sources.

Sound Levels

At the utility scale sites, sound levels along the fenced boundary of the PV arrays were generally at background levels, though a faint inverter hum could be heard at some locations along the boundary. Any sound from the PV array and equipment was inaudible and sound levels are at background levels at set back distances of 50 to 150 feet from the boundary.

Average L_{eq} sound levels at a distance of 10 feet from the inverter face varied over the range of 48 dBA to 61 dBA for Site 2 and Site 3 Inverters[7], and were higher in the range of 59 to 72 dBA for Site 1 Inverters. Along the axis perpendicular to the plane of the inverter face and at distances of 10 to 30 feet, sound levels were 4 to 13 dBA higher compared to levels at the same distance along the axis parallel to the plane of the inverter face. At a distance of 150 feet from the inverter pad, sound levels

[6] Only EMF measurements were made at the residential site.

[7] The same make of inverters were used at Sites 2 and 3.

approached background levels. Sound level measurements generally followed the hemispherical wave spreading law (-6 dB per doubling of distance).

The time domain analysis reveals that 0.1-second L_{eq} sound levels at a distance of 10 feet from an inverter pad generally varied over a range of 2 to 6 dBA, and no recurring pattern in the rise and fall of the inverter sound levels with time was detected. The passage of clouds across the face of the sun caused cooling fans in the inverters to briefly turn off and sound levels to drop 4 dBA.

The 1/3-octave band frequency spectrum of equipment sound at the close distance of 10 feet shows energy peaks in several mid-frequency and high-frequency bands, depending on the inverter model. Tonal sound was found to occur in harmonic pairs: 63/125 Hz; 315/630 Hz; 3,150/6,300 Hz; and 5,000/10,000 Hz. The high frequency peaks produce the characteristic "ringing noise" or high-frequency buzz heard when one stands close to an operating inverter. The tonal sound was not, however, audible at distances of 50 to 150 feet beyond the PV array boundary, and these tonal peaks do not appear in the background sound spectrum. All low-frequency sound from the inverters below 40 Hz is inaudible, at all distances.

Electric Fields

The International Commission on Non-Ionizing Radiation Protection has a recommended exposure limit of 4,200 V/m for the general public. At the utility scale sites, electric field levels along the fenced PV array boundary, and at the locations set back 50 to 150 feet from the boundary, were not elevated above background levels (< 5 V/m). Electric fields near the inverters were also not elevated above background levels (< 5 V/m).

At the residential site, indoor electric fields in the rooms closest to the roof-mounted panels and at locations near the inverters were not elevated above background levels (< 5 V/m).

Magnetic Fields

The International Commission on Non-Ionizing Radiation Protection has a recommended exposure limit of 833 mG for the general public. At the utility scale sites, magnetic field levels along the fenced PV array boundary were in the very low range of 0.2 to 0.4 mG. Magnetic field levels at the locations

50 to 150 feet from the array boundary were not elevated above background levels (<0.2 mG). There are significant magnetic fields at locations a few feet from inverters, in the range of 150 to 500 mG. At a distance of 150 feet from these utility-scale inverters, these fields drop back to very low levels of 0.5 mG or less, and in many cases to background levels (<0.2 mG). The variation of magnetic field with distance generally shows the field strength is proportional to the inverse cube of the distance from equipment.

At the residential site, indoor magnetic field levels in the rooms closest to the roof-mounted panels were in the low range of 0.2 to 1.4 mG. There are low-level magnetic fields at locations a few feet from the inverters, in the range of 6 to 10 mG. At a distance of no more than 9 feet from the inverters, these fields dropped back to the background level at the residential site of 2 mG. Due to the relatively high background level in the residential site basement where the inverters were housed, the relationship of magnetic field strength to distance from the inverters could not be discerned.

APPENDIX A
ACOUSTIC TERMS AND METRICS

All sounds originate with a source – a human voice, vehicles on a roadway, or an airplane overhead. The sound energy moves from the source to a person's ears as sound waves, which are minute variations in air pressure. The loudness of a sound depends on the **sound pressure level**[8], which has units of decibel (dB). The **decibel scale** is logarithmic to accommodate the wide range of sound intensities to which the human ear is subjected. On this scale, the quietest sound we can hear is 0 dB, while the loudest is 120 dB. Every 10-dB increase is perceived as a doubling of loudness. Most sounds we hear in our daily lives have sound pressure levels in the range of 30 dB to 90 dB.

A property of the decibel scale is that the numerical values of two separate sounds do not directly add. For example, if a sound of 70 dB is added to another sound of 70 dB, the total is only a 3-decibel increase (or 73 dB) on the decibel scale, not a doubling to 140 dB. In terms of sound perception, 3 dB is the minimum change most people can detect. In terms of the human perception of sound, a halving or doubling of loudness requires changes in the sound pressure level of about 10 dB; 3 dB is the minimum perceptible change for **broadband** sounds, i.e. sounds that include all frequencies. Typical sound levels associated with various activities and environments are presented in Table A-1. The existing sound levels at a PV project site are determined primarily by the proximity to roads and highways, the source of traffic noise. Sound exposure in a community is commonly expressed in terms of the **A-weighted sound level (dBA)**; A-weighting approximates the frequency response of the human ear and correlates well with people's perception of loudness.

The level of most sounds change from moment to moment. Some are sharp impulses lasting one second or less, while others rise and fall over much longer periods of time. There are various measures of sound pressure designed for different purposes. The equivalent sound level $\mathbf{L_{eq}}$ is the steady-state sound level over a period of time that has the same acoustic energy as the fluctuating sounds that actually occurred during that same period. It is commonly referred to as the energy-average sound

[8] The sound pressure level is defined as $20*\log_{10}(P/P_o)$ where P is the sound pressure and P_o is the reference pressure of 20 micro-Pascals (20 μPa), which by definition corresponds to 0 dB.

level and it includes in its measure all of the sound we hear. EPA has determined that the L_{eq} average sound level correlates best with how people perceive and react to sound.[9]

To establish the background sound level in an area, the L_{90} metric, which is the sound level exceeded 90% of the time, is typically used. The L_{90} can be thought of as the level representing the quietest 10% of any time interval. The L_{90} is a broadband sound pressure measure. By definition, the L_{90} metric will filter out brief, loud sounds, such as intermittent traffic on a nearby roadway.

Sound pressure level measurements typically include an analysis of the sound spectrum into its various frequency components to determine tonal characteristics. The unit of frequency is **Hertz (Hz)**, measuring the cycles per second of the sound pressure waves. In the physiology of human hearing, every octave jump of a tone corresponds to a doubling of the sound frequency in Hz. For example, Middle-C on a piano has a frequency of approximately 260 Hz. High-C, one octave above, has a frequency of approximately 520 Hz. The hearing range for most people is 20 Hz to 20,000 Hz. In acoustic studies, the sound spectrum is divided into **octave bands** with center frequencies that are an octave apart, or 1/3-octave bands with center frequencies that are 1/3 of an octave apart. There are 11 whole octave bands centered in the audible range from 20 to 20,000 Hz. For the extended frequency range of 6.3 Hz to 20,000 Hz used in this study, there are 36 1/3-octave bands.

Low-frequency sound generally refers to sounds below 250 Hz in frequency, which is close to the tone of Middle-C on a piano. **Infrasound** is low-frequency sound at frequencies below 20 Hz, a sound wave oscillating only 20 cycles per second. For comparison, the lowest key on a piano produces a tone of 28 Hz, and human speech is in the range of 500 to 2,000 Hz. The hearing threshold for infrasound at 16 Hz is 90 decibels (dB).[10] We are enveloped in naturally occurring infrasound, which is inaudible. Infrasound is always present in the outdoor environment due to sounds generated by air turbulence, shoreline waves, motor vehicle traffic and distant aircraft.

---

[9] U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," Publication EPA-550/9-74-004.

[10] International Standards Organization, ISO 226:2003.

TABLE A-1

VARIOUS INDOOR AND OUTDOOR SOUND LEVELS

Outdoor Sound Levels	Sound Pressure (μPa)		Sound Level (dBA)	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over-Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area--Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
Quiet Urban Area -- Daytime	20,000	-	60	
		-	55	Quiet Conversation at 1m
Quiet Urban Area--Nighttime	6,325	-	50	Dishwasher Next Room
		-	45	
Suburban Area--Nighttime	2,000	-	40	Empty Theater or Library
		-	35	
Rural Area--Nighttime	632	-	30	Quiet Bedroom at Night
		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	Average Whisper
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	Human Breathing
Reference Pressure Level	20	-	0	Threshold of Hearing

Notes:
μPa - Micropascals describe sound pressure levels (force/area).
dBA - A-weighted decibels describe sound pressure on a logarithmic scale with respect to 20 μPa.

APPENDIX B
EMF TERMS AND METRICS

An electromagnetic field (**EMF**) is the combination of an **electric field** and a **magnetic field**. The electric field is produced by stationary charges, and the magnetic field by moving charges (currents). From a classical physics perspective, the electromagnetic field can be regarded as a smooth, continuous field, propagated in a wavelike manner. From the perspective of quantum field theory, the field is seen as quantized, being composed of individual particles (photons).

EMFs are present everywhere in our environment but are invisible to the human eye. For example, electric fields are produced by the local build-up of electric charges in the atmosphere associated with thunderstorms, and the earth's magnetic field causes a compass needle to orient in a North-South direction and is used for navigation. Besides natural sources, the electromagnetic spectrum also includes fields generated by man-made sources. For example, the electricity that comes out of every power socket has associated low frequency EMFs. A photovoltaic (PV) project generates low-frequency EMFs from inverters (that convert DC-current to AC-current), transformers (that step-up the PV project voltage), and current-carrying cables. The EMFs from PV project components are classified as "non-ionizing radiation," because the electromagnetic waves have low-energy quanta incapable of breaking chemical bonds in objects through which they pass.

The strength of the **electric field** is measured in volts per meter (**V/m**). Any electrical wire that is charged will produce an associated electric field. This field exists even when there is no current flowing. The higher the voltage, the stronger the electric field at a given distance from the wire. Magnetic fields arise from the motion of electric charges. The strength of the **magnetic field** is measured by the magnetic flux density in milli-Gauss (**mG**). In contrast to electric fields, a magnetic field is only produced once a device is switched on and current flows. The higher the current, the greater the strength of the magnetic field produced at a given distance. EMFs are strongest close to a source, and their strength rapidly diminishes with distance from it. Field strength is generally proportional to the inverse cube of the distance.

Typical household fixtures and appliances produce both types of fields. For example, at a distance of one foot from a fluorescent light, electric and magnetic fields of 50 V/m and 2 mG, respectively, are measured. At a distance of 1 inch from the power cord for an operating personal computer, fields of 40 V/m and 1 mG, respectively, are detected.

There are no federal, State or local regulatory exposure limits for electric or magnetic fields that apply to solar photovoltaic arrays. The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has recommended exposure limits of 4,200 V/m and 833 mG for the general public. ICNIRP is an organization of 15,000 scientists in 40 nations who specialize in radiation protection, and their recommendations are routinely used in EMF exposure studies.

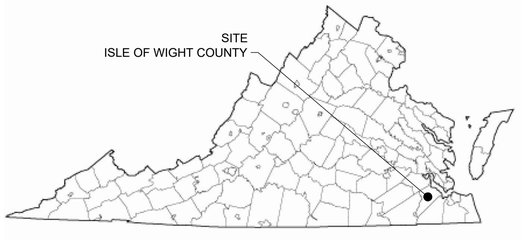
Exhibit C

Conceptual Site Plan

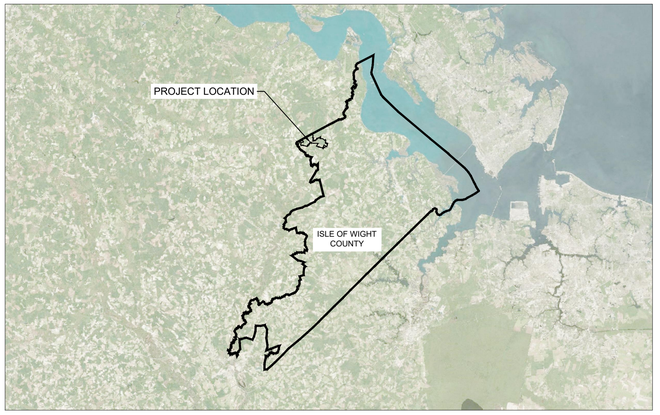
CONCEPT SITE PLANS

CAVALIER SOLAR

COUNTY OF ISLE OF WIGHT, VA



CAVALIER SOLAR	
OWNER	sPOWER
EXISTING ZONING	AGRICULTURAL
PROPOSED USE	SOLAR ENERGY FACILITY
TOTAL POWER TO BE GENERATED	MAX. 240 MEGAWATTS AC (MWac)
TAX MAP PARCEL NUMBER	SEE SHEET C1.1
OVERALL PROJECT SITE DATA	
TOTAL PROJECT AREA	5,050 ACRES
PROJECT AREA IN ISLE OF WIGHT COUNTY	1,774 ACRES
FENCED/PANEL AREA IN ISLE OF WIGHT COUNTY	450 ACRES



VICINITY MAP - COUNTY OF ISLE OF WIGHT, VA
1" = 40,000'

SHEET INDEX	
C0.0	COVER SHEET
C1.0	OVERALL POTENTIAL PRESERVATION AREA MAP
C1.1	OVERALL POTENTIAL PRESERVATION AREA MAP - AERIAL
C1.2	OVERALL PLAN 1 OF 3 - EXHIBIT A, CONCEPTUAL PLAN
C1.3	OVERALL PLAN 2 OF 3 - EXHIBIT B, ISLE OF WIGHT CONCEPTUAL PLAN
C1.4	OVERALL PLAN 3 OF 3 - EXHIBIT C, ISLE OF WIGHT CONCEPTUAL PLAN
C1.5	SITE PLAN 1 OF 2 - EXHIBIT D, ISLE OF WIGHT ZONING MAP
C1.6	SITE PLAN 2 OF 2 - EXHIBIT D, ISLE OF WIGHT ZONING MAP
C1.7	EXAMPLE LANDSCAPING DETAILS
C1.8	SITE DETAILS

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NOT FOR CONSTRUCTION

KHA PROJECT
DATE 02/16/2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY SAH
CHECKED BY SMM

COVER SHEET

CAVALIER SOLAR
PREPARED FOR
S-POWER
VIRGINIA
ISLE OF WIGHT COUNTY

SHEET NUMBER
C0.0

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GRAPHIC SCALE IN FEET
0 750 1500 3000

NORTH

EXISTING PARCEL LIMITS FOR PARCEL 53-6

PROPOSED PARCEL BOUNDARY FOR 53-6

ROUTE 617
WHITE MARSH ROAD

ROUTE 626
BEECHLAND ROAD

ROUTE 617
WHITE MARSH ROAD

ROUTE 626
BELLEVUE ROAD

SURRY COUNTY
ISLE OF WIGHT COUNTY

ROUTE 621
BURSWELL BAY ROAD

ROUTE 626
JONES ROAD

PROJECT SUBSTATION

ROUTE 623
MILL SWAMP ROAD

SURRY COUNTY
ISLE OF WIGHT COUNTY

ROUTE 626
MILL SWAMP ROAD

ROUTE 626
MILL SWAMP ROAD

LEGEND

- PARCEL BOUNDARIES FOR LAND UNDER OPTION
- ADJACENT NON-PARTICIPATING PARCELS
- INTERIOR PARCEL BOUNDARIES OF 53-6
- PORTION OF PARCEL 53-6 EXCLUDED FROM PROJECT SITE LIMITS
- DELINEATED WETLANDS
- PUBLIC ROAD CENTERLINE
- PROJECT ACCESS ROADS
- COUNTY LINE
- PROPOSED PANEL FENCE LINE
- PROPOSED LAYDOWN YARDS/PARKING AREAS
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT
- ANTICIPATED PRESERVATION AREAS. FINAL PRESERVATION AREAS TO BE DETERMINED DURING FINAL SITE PLAN. VEGETATION WITHIN PRESERVATION AREAS WILL BE ALLOWED TO GROW BACK NATURALLY. SOME AREAS MAY BE BE RE-SEEDED WITH PRE-APPROVED SEED MIX.
- APPROXIMATELY 200 ACRE CONSERVATION AREA TO BE DESIGNATED FOR PUBLIC USE AND OPERATED IN PARTNERSHIP WITH THE COUNTY AND STATE

POTENTIAL PRESERVATION LAND	
COUNTY	ACRES
SURRY	± 1020
ISLE OF WIGHT	± 335

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OVERALL POTENTIAL PRESERVATION AREA MAP

CAVALIER SOLAR
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ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.0

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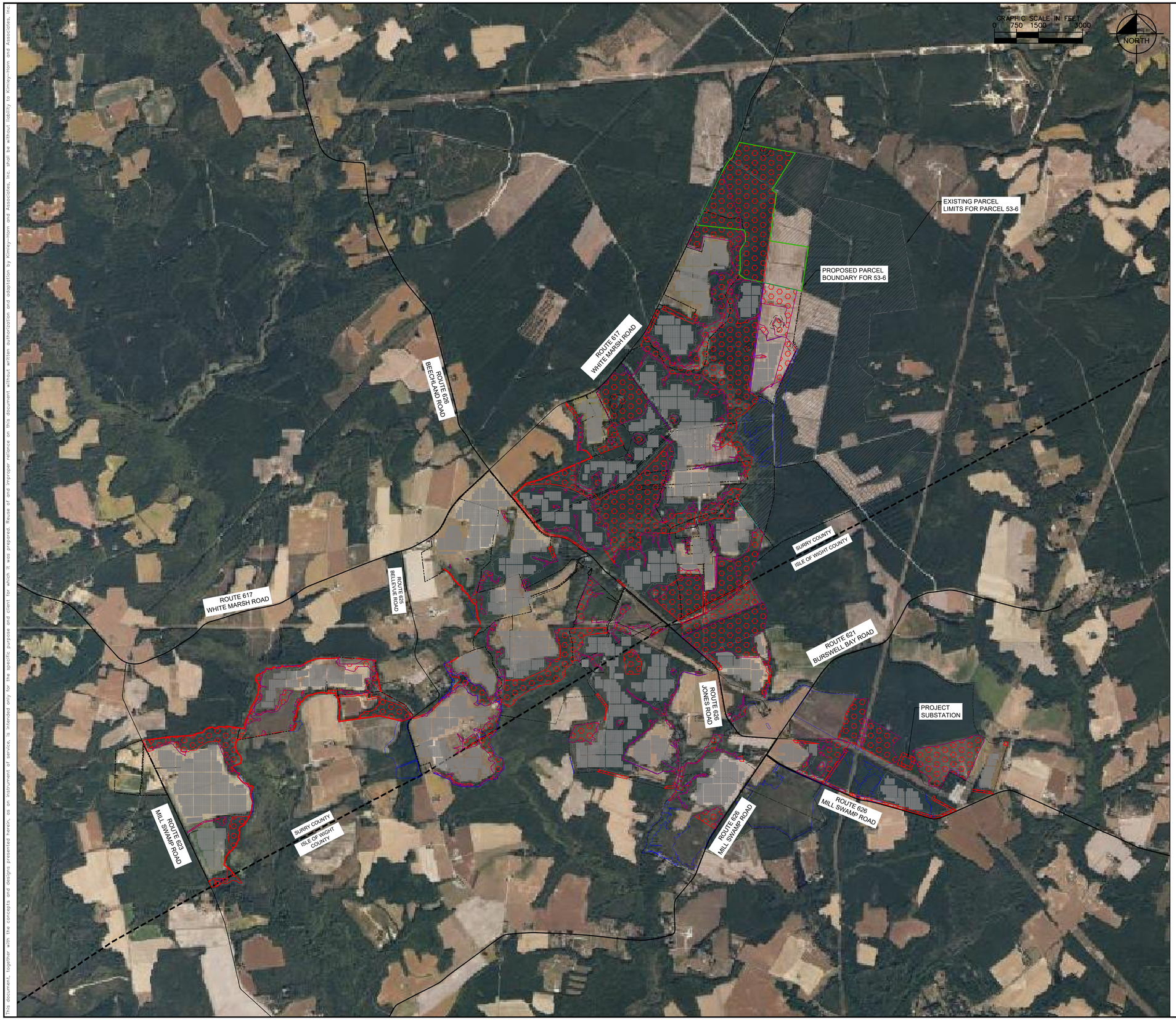

LEGEND

- PARCEL BOUNDARIES FOR LAND UNDER OPTION
- ADJACENT NON-PARTICIPATING PARCELS
- INTERIOR PARCEL BOUNDARIES OF 53-6
- PORTION OF PARCEL 53-6 EXCLUDED FROM PROJECT SITE LIMITS
- DELINEATED WETLANDS
- PUBLIC ROAD CENTERLINE
- PROJECT ACCESS ROADS
- COUNTY LINE
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- PROPOSED LAYDOWN YARDS/PARKING AREAS
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POTENTIAL PRESERVATION LAND	
COUNTY	ACRES
SURRY	± 1020
ISLE OF WIGHT	± 335

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DATE	02/16/2021
SCALE	AS SHOWN
DESIGNED BY	
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POTENTIAL PRESERVATION AREA MAP - AERIAL

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ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
EX-2

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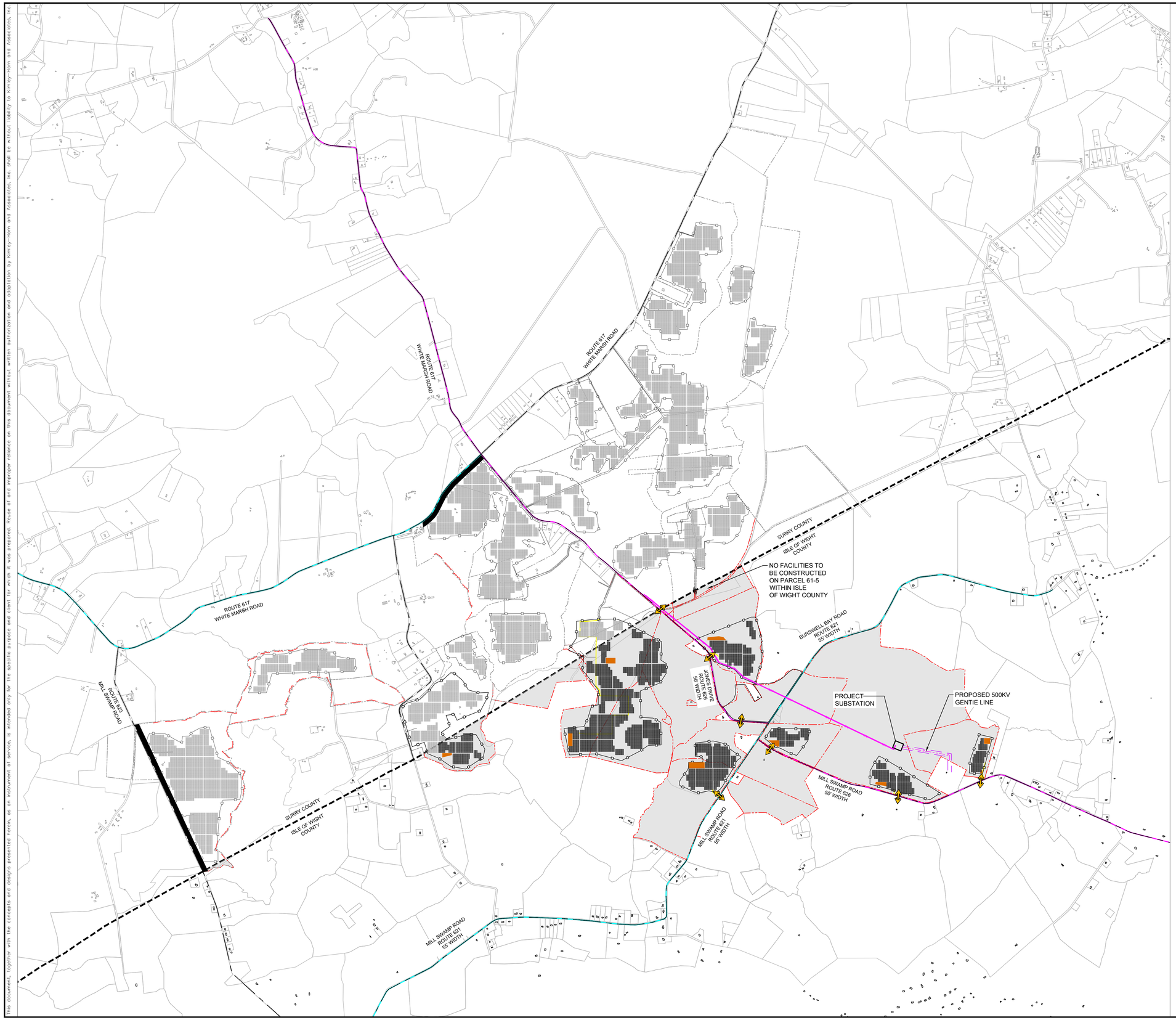

GENERAL NOTES:

1. PROJECT AC SIZE: MAXIMUM 240 MW
2. VARIABLE WIDTH SETBACK ON VERNAL POOLS BASED ON QUALITY OF POOL AS DETERMINED DURING SITE VISIT
3. 50' WETLAND SETBACK
4. sPOWER TO INSTALL 6' FENCE AROUND PROJECT LIMITS

ISLE OF WIGHT COUNTY NOTES:

5. IN ACCORDANCE WITH ISLE OF WIGHT COUNTY ORDINANCE SECT. 5-5003.M.4.D, ALL EQUIPMENT, ACCESSORY STRUCTURES AND OPERATIONS ASSOCIATED WITH A LARGE SOLAR ENERGY SYSTEM SHALL BE SETBACK AT LEAST 75' FROM ALL PROPERTY LINES AND AT LEAST 125' FROM ANY RESIDENTIAL PARCELS. SEE SHEETS C1.3 - C.14 FOR MORE DETAIL.
10. RIGHT OF WAY WIDTHS FOR 621 AND 626 ARE 25' FROM ROAD CENTERLINE.
11. 75' SETBACK FROM PUBLIC RIGHT OF WAY, SEE SHEETS C1.3 - C1.4 FOR MORE DETAIL.
12. POTENTIAL WETLANDS AREAS AS INDICATED BY APPLICANT'S DESKTOP REVIEW WILL BE DELINEATED BY APPLICANT AND SUBMITTED TO US ARMY CORPS OF ENGINEERS FOR CONFIRMATION PRIOR TO CONSTRUCTION. WETLANDS CONFIRMED BY THE US ARMY CORPS OF ENGINEERS WILL BE AVOIDED.

PROJECT AREAS	
TOTAL PROJECT AREA	5,050 ACRES
PROJECT AREA WITHIN ISLE OF WIGHT	1,774 ACRES
AREA UNDER PANELS	450 ACRES
CONSTRUCTION LAYDOWN AREAS	10 ACRES

NORTH

GRAPHIC SCALE IN FEET
0 750 1500 3000

LEGEND

- PARCEL BOUNDARIES FOR LAND UNDER OPTION
- ADJACENT NON-PARTICIPATING PARCELS
- PUBLIC ROAD CENTERLINE
- TRAFFIC ROUTE - PREFERENCE 1
- TRAFFIC ROUTE - PREFERENCE 2
- COUNTY LINE
- PROPOSED PANEL FENCE LINE
- PROPOSED MV ROUTE
- PROPOSED 500KV GENTIE LINE
- 500KV GENTIE LINE EASEMENT
- PROPOSED ACCESS ROADS
- PROPOSED LAYDOWN YARDS/PARKING AREAS
- PROPOSED INGRESS/EGRESS LOCATIONS
- EXISTING RESIDENCES
- ISLE OF WIGHT PORTION OF CAVALIER PROJECT
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT IN ISLE OF WIGHT COUNTY
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT IN SURRY COUNTY

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DATE 02/16/2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY SAH
CHECKED BY SMM

OVERALL PLAN 1 OF 3 - EXHIBIT A, CONCEPTUAL PLAN

CAVALIER SOLAR
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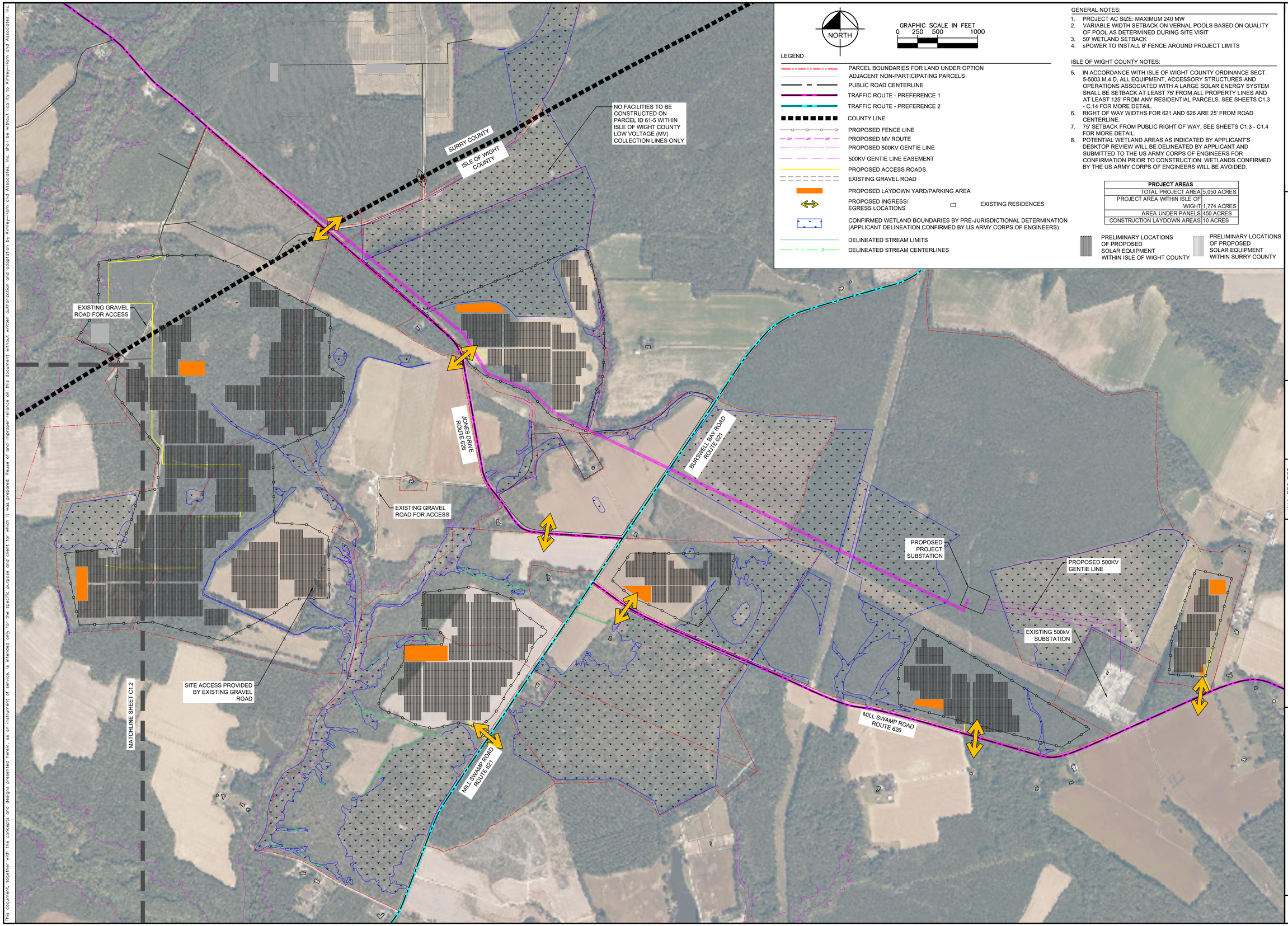
VIRGINIA
ISLE OF WIGHT COUNTY

SHEET NUMBER
C1.2



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KHA PROJECT

DATE	02/16/2021
SCALE	AS SHOWN
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DRAWN BY	SAH
CHECKED BY	SMM

OVERALL PLAN 2 OF 3 - EXHIBIT B, ISLE OF WIGHT CONCEPTUAL PLAN

CAVALIER SOLAR

PREPARED FOR S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER C1.3

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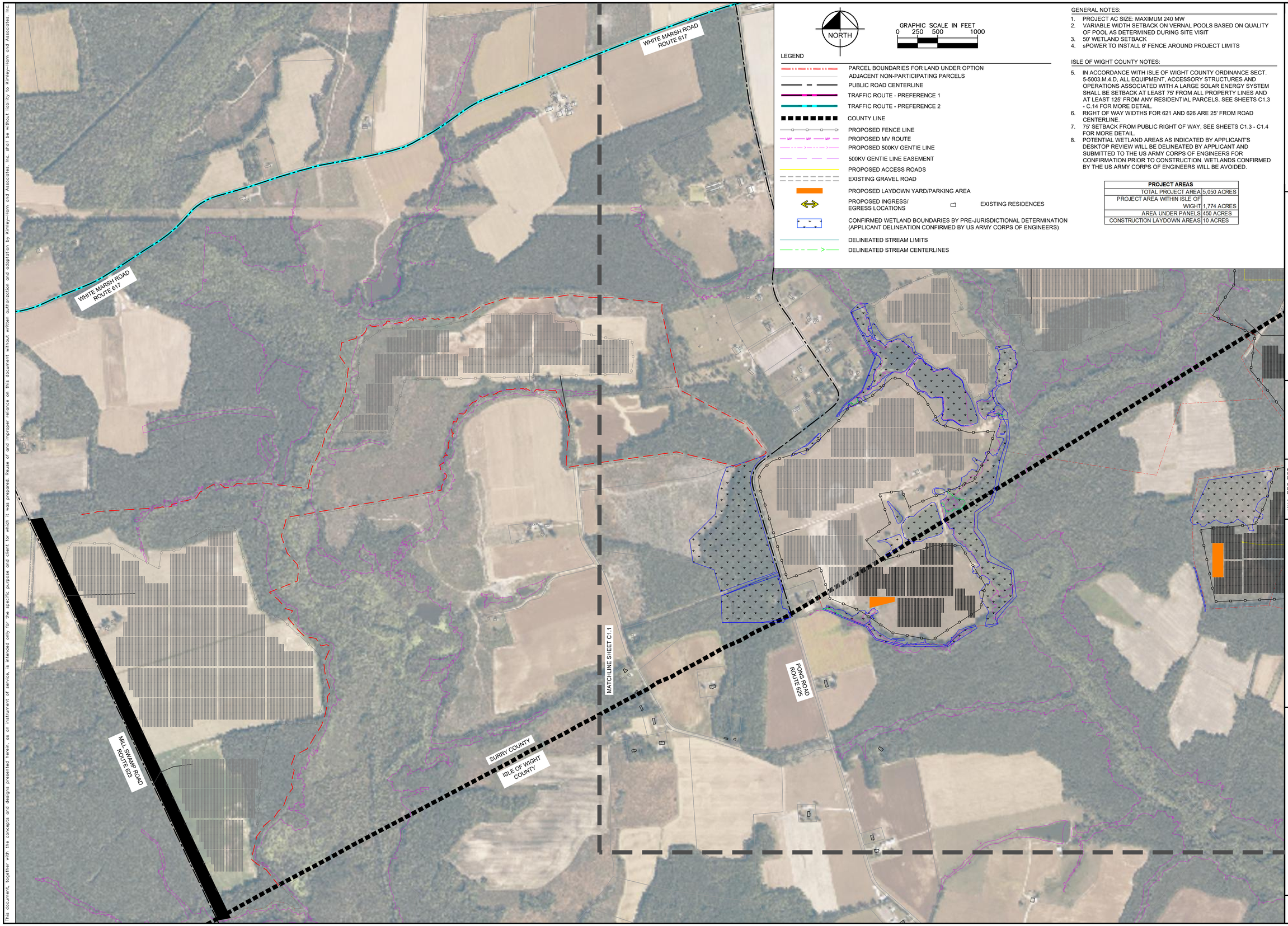

NORTH

GRAPHIC SCALE IN FEET
0 250 500 1000

LEGEND

- PARCEL BOUNDARIES FOR LAND UNDER OPTION
- ADJACENT NON-PARTICIPATING PARCELS
- PUBLIC ROAD CENTERLINE
- TRAFFIC ROUTE - PREFERENCE 1
- TRAFFIC ROUTE - PREFERENCE 2
- COUNTY LINE
- PROPOSED FENCE LINE
- PROPOSED MV ROUTE
- PROPOSED 500KV GENTIE LINE
- 500KV GENTIE LINE EASEMENT
- PROPOSED ACCESS ROADS
- EXISTING GRAVEL ROAD
- PROPOSED LAYDOWN YARD/PARKING AREA
- PROPOSED INGRESS/ EGRESS LOCATIONS
- EXISTING RESIDENCES
- CONFIRMED WETLAND BOUNDARIES BY PRE-JURISDICTIONAL DETERMINATION (APPLICANT DELINEATION CONFIRMED BY US ARMY CORPS OF ENGINEERS)
- DELINEATED STREAM LIMITS
- DELINEATED STREAM CENTERLINES

GENERAL NOTES:

1. PROJECT AC SIZE: MAXIMUM 240 MW
2. VARIABLE WIDTH SETBACK ON VERNAL POOLS BASED ON QUALITY OF POOL AS DETERMINED DURING SITE VISIT
3. 50' WETLAND SETBACK
4. sPOWER TO INSTALL 6' FENCE AROUND PROJECT LIMITS

ISLE OF WIGHT COUNTY NOTES:

5. IN ACCORDANCE WITH ISLE OF WIGHT COUNTY ORDINANCE SECT. 5-5003.M.4.D, ALL EQUIPMENT, ACCESSORY STRUCTURES AND OPERATIONS ASSOCIATED WITH A LARGE SOLAR ENERGY SYSTEM SHALL BE SETBACK AT LEAST 75' FROM ALL PROPERTY LINES AND AT LEAST 125' FROM ANY RESIDENTIAL PARCELS. SEE SHEETS C1.3 - C.14 FOR MORE DETAIL.
6. RIGHT OF WAY WIDTHS FOR 621 AND 626 ARE 25' FROM ROAD CENTERLINE.
7. 75' SETBACK FROM PUBLIC RIGHT OF WAY, SEE SHEETS C1.3 - C1.4 FOR MORE DETAIL.
8. POTENTIAL WETLAND AREAS AS INDICATED BY APPLICANT'S DESKTOP REVIEW WILL BE DELINEATED BY APPLICANT AND SUBMITTED TO THE US ARMY CORPS OF ENGINEERS FOR CONFIRMATION PRIOR TO CONSTRUCTION. WETLANDS CONFIRMED BY THE US ARMY CORPS OF ENGINEERS WILL BE AVOIDED.

PROJECT AREAS	
TOTAL PROJECT AREA	5,050 ACRES
PROJECT AREA WITHIN ISLE OF WIGHT	1,774 ACRES
AREA UNDER PANELS	450 ACRES
CONSTRUCTION LAYDOWN AREAS	10 ACRES

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PHONE: 703-674-1300
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NOT FOR CONSTRUCTION

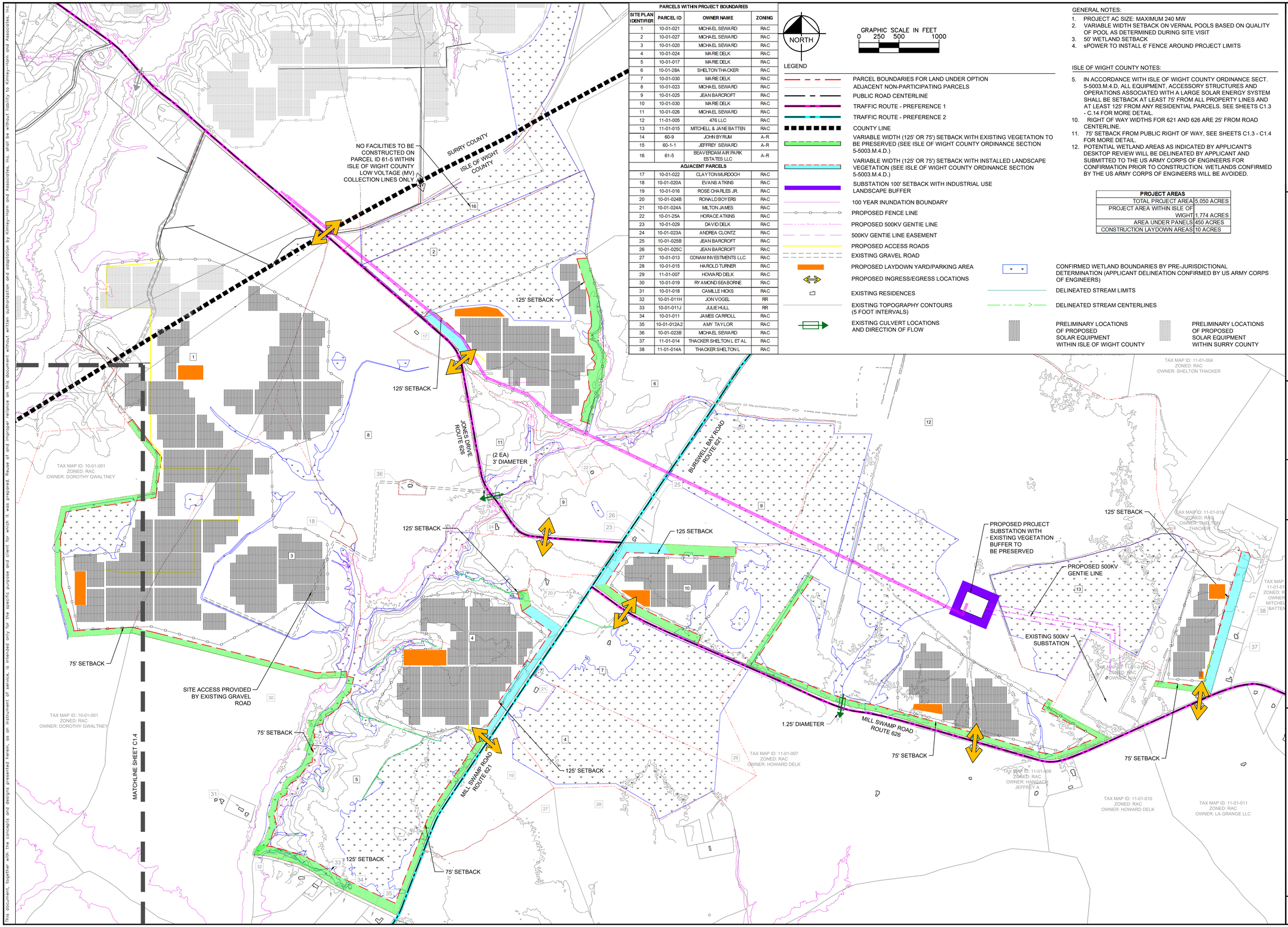
KHA PROJECT	
DATE	02/16/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

OVERALL PLAN 3 OF 3 - EXHIBIT C, ISLE OF WIGHT CONCEPTUAL PLAN

CAVALIER SOLAR
PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.4



PARCELS WITHIN PROJECT BOUNDARIES			
SITE PLAN IDENTIFIER	PARCEL ID	OWNER NAME	ZONING
1	10-01-021	MICHAEL SEWARD	RAC
2	10-01-027	MICHAEL SEWARD	RAC
3	10-01-020	MICHAEL SEWARD	RAC
4	10-01-024	MARIE DELK	RAC
5	10-01-017	MARIE DELK	RAC
6	10-01-28A	SHELTON THACKER	RAC
7	10-01-030	MARIE DELK	RAC
8	10-01-023	MICHAEL SEWARD	RAC
9	10-01-025	JEAN BARCROFT	RAC
10	10-01-030	MARIE DELK	RAC
11	10-01-026	MICHAEL SEWARD	RAC
12	11-01-005	476 LLC	RAC
13	11-01-015	MITCHELL & JANE BATTEN	RAC
14	60-9	JOHN BYRUM	A-R
15	60-1-1	JEFFREY SEWARD	A-R
16	61-5	BEAVERDAM AIR PARK ESTATES LLC	A-R
ADJACENT PARCELS			
17	10-01-022	CLAYTON MURDOCH	RAC
18	10-01-020A	EVANS ATKINS	RAC
19	10-01-016	ROSE CHARLES JR.	RAC
20	10-01-024B	RONALD BOYERS	RAC
21	10-01-024A	MILTON JAMES	RAC
22	10-01-25A	HORACE ATKINS	RAC
23	10-01-029	DAVID DELK	RAC
24	10-01-023A	ANDREA CLONTZ	RAC
25	10-01-025B	JEAN BARCROFT	RAC
26	10-01-025C	JEAN BARCROFT	RAC
27	10-01-013	CONAM INVESTMENTS LLC	RAC
28	10-01-015	HAROLD TURNER	RAC
29	11-01-007	HOWARD DELK	RAC
30	10-01-019	RYAMOND SEABORNE	RAC
31	10-01-018	CAMILLE HICKS	RAC
32	10-01-011H	JON VOGEL	RR
33	10-01-011J	JULIE HULL	RR
34	10-01-011	JAMES CARROLL	RAC
35	10-01-012A2	AMY TAYLOR	RAC
36	10-01-023B	MICHAEL SEWARD	RAC
37	11-01-014	THACKER SHELTON L ET AL	RAC
38	11-01-014A	THACKER SHELTON L	RAC

NORTH

GRAPHIC SCALE IN FEET
0 250 500 1000

LEGEND

- PARCEL BOUNDARIES FOR LAND UNDER OPTION
- ADJACENT NON-PARTICIPATING PARCELS
- PUBLIC ROAD CENTERLINE
- TRAFFIC ROUTE - PREFERENCE 1
- TRAFFIC ROUTE - PREFERENCE 2
- COUNTY LINE
- VARIABLE WIDTH (125' OR 75') SETBACK WITH EXISTING VEGETATION TO BE PRESERVED (SEE ISLE OF WIGHT COUNTY ORDINANCE SECTION 5-5003.M.4.D.)
- VARIABLE WIDTH (125' OR 75') SETBACK WITH INSTALLED LANDSCAPE VEGETATION (SEE ISLE OF WIGHT COUNTY ORDINANCE SECTION 5-5003.M.4.D.)
- SUBSTATION 100' SETBACK WITH INDUSTRIAL USE LANDSCAPE BUFFER
- 100 YEAR INUNDATION BOUNDARY
- PROPOSED FENCE LINE
- PROPOSED 500KV GENTIE LINE
- 500KV GENTIE LINE EASEMENT
- PROPOSED ACCESS ROADS
- EXISTING GRAVEL ROAD
- PROPOSED LAYDOWN YARD/PARKING AREA
- PROPOSED INGRESS/EGRESS LOCATIONS
- EXISTING RESIDENCES
- EXISTING TOPOGRAPHY CONTOURS (5 FOOT INTERVALS)
- EXISTING CULVERT LOCATIONS AND DIRECTION OF FLOW
- CONFIRMED WETLAND BOUNDARIES BY PRE-JURISDICTIONAL DETERMINATION (APPLICANT DELINEATION CONFIRMED BY US ARMY CORPS OF ENGINEERS)
- DELINEATED STREAM LIMITS
- DELINEATED STREAM CENTERLINES
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT WITHIN ISLE OF WIGHT COUNTY
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT WITHIN SURRY COUNTY

GENERAL NOTES:

1. PROJECT AC SIZE: MAXIMUM 240 MW
2. VARIABLE WIDTH SETBACK ON VERNAL POOLS BASED ON QUALITY OF POOL AS DETERMINED DURING SITE VISIT
3. 50' WETLAND SETBACK
4. sPOWER TO INSTALL 6' FENCE AROUND PROJECT LIMITS

ISLE OF WIGHT COUNTY NOTES:

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NOT FOR CONSTRUCTION

KHA PROJECT			
DATE	02/16/2021	DESIGNED BY	SAH
SCALE	AS SHOWN	DRAWN BY	SMM
		CHECKED BY	

SITE PLAN 1 OF 2 - EXHIBIT D, ISLE OF WIGHT ZONING MAP

CAVALIER SOLAR
PREPARED FOR S-POWER
ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.5

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NORTH

GRAPHIC SCALE IN FEET
0 250 500 1000

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CONSTRUCTION LAYDOWN AREAS	10 ACRES

WHITE MARSH ROAD
ROUTE 617

MILL SWAMP ROAD
ROUTE 623

SURRY COUNTY
ISLE OF WIGHT COUNTY

MATCHLINE SHEET C1.3

PONS ROAD
ROUTE 625

1' DIAMETER

75' SETBACK

75' SETBACK

TAX MAP ID: 10-01-001
ZONED: RAC
OWNER: DOROTHY GWALTNEY

TAX MAP ID: 10-01-001
ZONED: RAC
OWNER: DOROTHY GWALTNEY

14

15

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NOT FOR CONSTRUCTION

KHA PROJECT

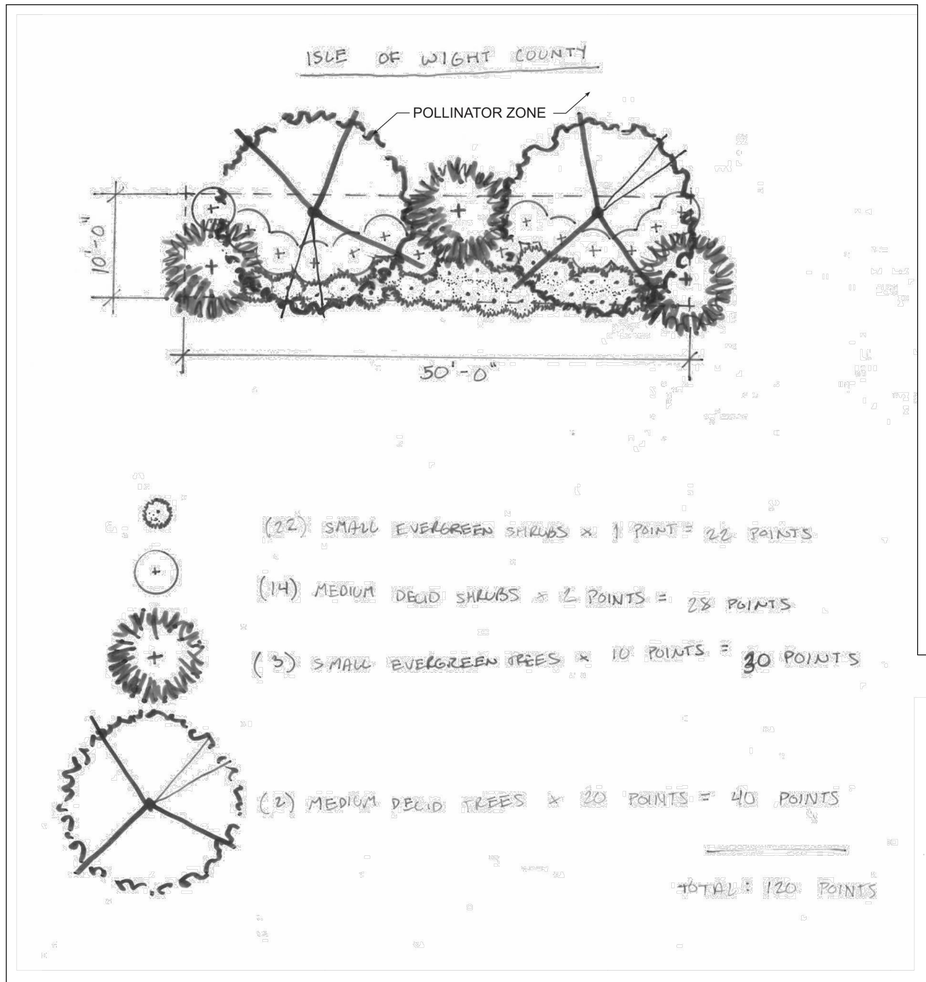
DATE 02/16/2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY SAH
CHECKED BY SMM

SITE PLAN 2 OF 2 - EXHIBIT D, ISLE OF WIGHT ZONING MAP

CAVALIER SOLAR
PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.6



iv. Zone requirements.

1. Frontage zone. .....The frontage zone is a landscaping area located along the entire frontage of the parcel with a width equal to the width of the required front setback or visual buffer for the parcel, as defined by the zoning district or appropriate overlay district.

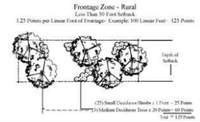
a. There are two (2) frontage zone classifications.

i. Rural frontage zone applies to all properties which are outside of the designated development service districts and village centers of the county comprehensive plan.

(A) In the rural frontage zone, properties can, regardless of the required setback, provide one (1) of the following:

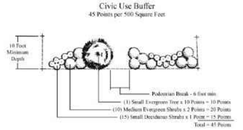
(1) Return the zone to native vegetation and leave the zone untouched. Native vegetation shall be defined as a minimum of one and one-quarter (1.25) points of landscaping per linear foot of lot frontage using species native to southeastern Virginia.

(2) If the existing vegetation within the zone is deemed adequate to meet the required landscaping points, as determined by the zoning administrator or his designee, the existing vegetation may be maintained, leaving the zone area untouched.



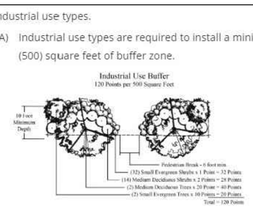
iii. Civic use types.

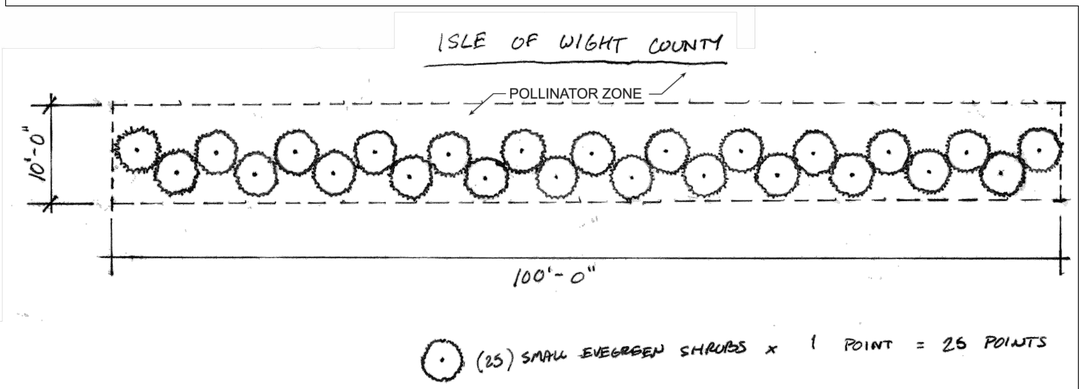
(A) Civic use types are required to install a minimum of forty-five (45) points of landscaping per five hundred (500) square feet of buffer zone.



v. Industrial use types.

(A) Industrial use types are required to install a minimum of one hundred twenty (120) points of landscaping per five hundred (500) square feet of buffer zone.





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NOT FOR CONSTRUCTION

KHA PROJECT

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SCALE	AS SHOWN
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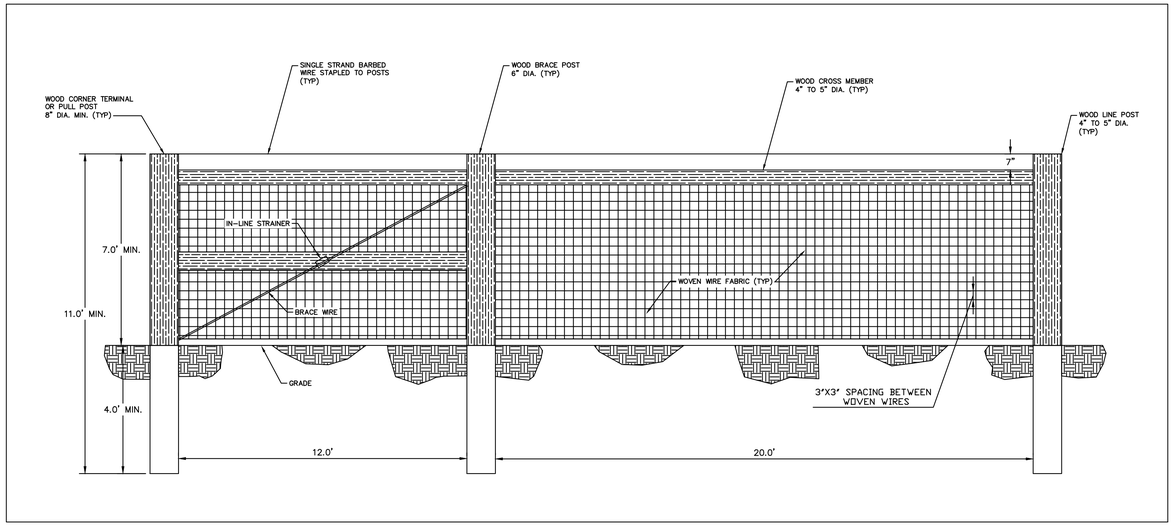
DRAWN BY	SAH
CHECKED BY	SMM

EXAMPLE LANDSCAPING DETAILS

CAVALIER SOLAR
PREPARED FOR
S-POWER
ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.7



1 AGRICULTURAL STYLE FENCE DETAIL

N.T.S.

1. WOVEN WIRE FABRIC SHALL BE FIXED KNOT FENCE FABRIC WITH 3"X3" OPENINGS.
2. ALL METALLIC PARTS SHALL BE GALVANIZED.
3. TOP WIRE SHALL ALWAYS BE A MINIMUM OF 7' ABOVE GRADE.
4. WITHOUT ADDITIONAL INLINE BRACES, MAXIMUM SPACING BETWEEN POSTS SHALL BE 1,320'.

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NOT FOR CONSTRUCTION

KHA PROJECT

DATE	02/16/2021
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DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

SITE DETAILS

CAVALIER SOLAR
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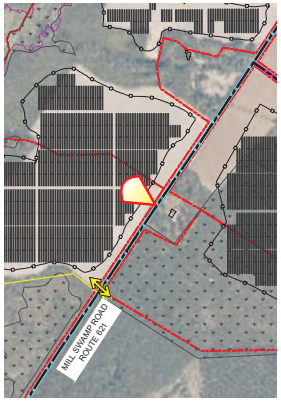
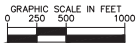
ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.8





CAVALIER SOLAR ENERGY

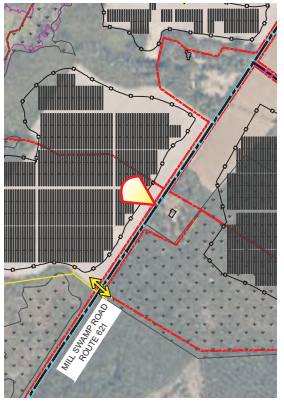
Isle of Wight County, Virginia

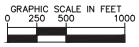
S·POWER
An AES and AIMCo Company

View 7 - Original

NOVEMBER 2020

Kimley»Horn





CAVALIER SOLAR ENERGY

Isle of Wight County, Virginia

S·POWER
An AES and AIMCo Company

View 7 - Proposed Condition (No Buffer)

NOVEMBER 2020

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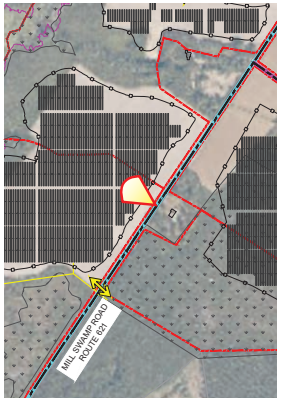

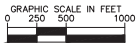

CAVALIER SOLAR ENERGY

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Exhibit D

Health and Safety Impacts of Photovoltaics

NC CLEAN ENERGY
TECHNOLOGY CENTER

Health and Safety Impacts of Solar Photovoltaics

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NC STATE UNIVERSITY

Health and Safety Impacts of Solar Photovoltaics

The increasing presence of utility-scale solar photovoltaic (PV) systems (sometimes referred to as solar farms) is a rather new development in North Carolina's landscape. Due to the new and unknown nature of this technology, it is natural for communities near such developments to be concerned about health and safety impacts. Unfortunately, the quick emergence of utility-scale solar has cultivated fertile grounds for myths and half-truths about the health impacts of this technology, which can lead to unnecessary fear and conflict.

Photovoltaic (PV) technologies and solar inverters are not known to pose any significant health dangers to their neighbors. The most important dangers posed are increased highway traffic during the relative short construction period and dangers posed to trespassers of contact with high voltage equipment. This latter risk is mitigated by signage and the security measures that industry uses to deter trespassing. As will be discussed in more detail below, risks of site contamination are much less than for most other industrial uses because PV technologies employ few toxic chemicals and those used are used in very small quantities. Due to the reduction in the pollution from fossil-fuel-fired electric generators, the overall impact of solar development on human health is overwhelmingly positive. This pollution reduction results from a partial replacement of fossil-fuel fired generation by emission-free PV-generated electricity, which reduces harmful sulfur dioxide (SO_2), nitrogen oxides (NO_x), and fine particulate matter ($PM_{2.5}$). Analysis from the National Renewable Energy Laboratory and the Lawrence Berkeley National Laboratory, both affiliates of the U.S. Department of Energy, estimates the health-related air quality benefits to the southeast region from solar PV generators to be worth 8.0 ¢ per kilowatt-hour of solar generation.[1] This is in addition to the value of the electricity and suggests that the air quality benefits of solar are worth more than the electricity itself.

Even though we have only recently seen large-scale installation of PV technologies, the technology and its potential impacts have been studied since the 1950s. A combination of this solar-specific research and general scientific research has led to the scientific community having a good understanding of the science behind potential health and safety impacts of solar energy. This paper utilizes the latest scientific literature and knowledge of solar practices in N.C. to address the health and safety risks associated with solar PV technology. These risks are extremely small, far less than those associated with common activities such as driving a car, and vastly outweighed by health benefits of the generation of clean electricity.

This paper addresses the potential health and safety impacts of solar PV development in North Carolina, organized into the following four categories:

(1) Hazardous Materials
(2) Electromagnetic Fields (EMF)
(3) Electric Shock and Arc Flash
(4) Fire Safety

1. Hazardous Materials

One of the more common concerns towards solar is that the panels (referred to as "modules" in the solar industry) consist of toxic materials that endanger public health. However, as shown in this section, solar energy systems may contain small amounts of toxic materials, but these materials do not endanger public health. To understand potential toxic hazards coming from a solar project, one must understand system installation, materials used, the panel end-of-life protocols, and system operation. This section will examine these aspects of a solar farm and the potential for toxicity impacts in the following subsections:

(1.2) Project Installation/Construction
(1.2) System Components
    1.2.1 Solar Panels: Construction and Durability
    1.2.2 Photovoltaic technologies
        (a) Crystalline Silicon
        (b) Cadmium Telluride (CdTe)
        (c) CIS/CIGS
    1.2.3 Panel End of Life Management
    1.2.4 Non-panel System Components
(1.3) Operations and Maintenance

1.1 Project Installation/Construction

The system installation, or construction, process does not require toxic chemicals or processes. The site is mechanically cleared of large vegetation, fences are constructed, and the land is surveyed to layout exact installation locations. Trenches for underground wiring are dug and support posts are driven into the ground. The solar panels are bolted to steel and aluminum support structures and wired together. Inverter pads are installed, and an inverter and transformer are installed on each pad. Once everything is connected, the system is tested, and only then turned on.

Figure 1: Utility-scale solar facility (5 MW_{AC}) located in Catawba County. Source: Strata Solar

1.2 System Components

1.2.1 Solar Panels: Construction and Durability

Solar PV panels typically consist of glass, polymer, aluminum, copper, and semiconductor materials that can be recovered and recycled at the end of their useful life.[2] Today there are two PV technologies used in PV panels at utility-scale solar facilities, silicon, and thin film. As of 2016, all thin film used in North Carolina solar facilities are cadmium telluride (CdTe) panels from the US manufacturer First Solar, but there are other thin film PV panels available on the market, such as Solar Frontier's CIGS panels. Crystalline silicon technology consists of silicon wafers which are made into cells and assembled into panels, thin film technologies consist of thin layers of semiconductor material deposited onto glass, polymer or metal substrates. While there are differences in the components and manufacturing processes of these two types of solar technologies, many aspects of their PV panel construction are very similar. Specifics about each type of PV chemistry as it relates to toxicity are covered in subsections a, b, and c in section 1.2.2; on crystalline silicon, cadmium telluride, and CIS/CIGS respectively. The rest of this section applies equally to both silicon and thin film panels.

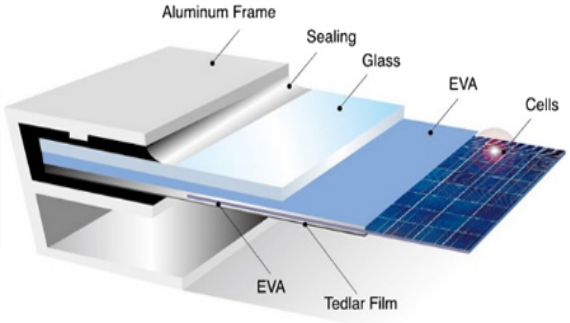

Figure 2: Components of crystalline silicon panels. The vast majority of silicon panels consist of a glass sheet on the topside with an aluminum frame providing structural support. Image Source: www.riteksolar.com.tw

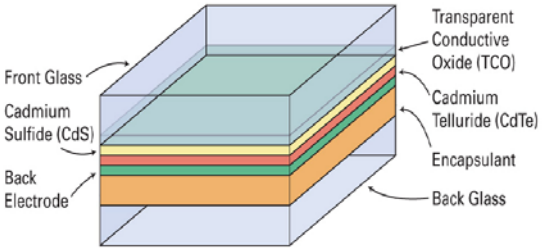

Figure 3: Layers of a common frameless thin-film panel (CdTe). Many thin film panels are frameless, including the most common thin-film panels, First Solar's CdTe. Frameless panels have protective glass on both the front and back of the panel. Layer thicknesses not to scale. Image Source: www.homepower.com

To provide decades of corrosion-free operation, PV cells in PV panels are encapsulated from air and moisture between two layers of plastic. The encapsulation layers are protected on the top with a layer of tempered glass and on the backside with a polymer sheet. Frameless modules include a protective layer of glass on the rear of the panel, which may also be tempered. The plastic ethylene-vinyl acetate (EVA) commonly provides the cell encapsulation. For decades, this same material has been used between layers of tempered glass to give car windshields and hurricane windows their great strength. In the same way that a car windshield cracks but stays intact, the EVA layers in PV panels keep broken panels intact (see Figure 4). Thus, a damaged module does not generally create small pieces of debris; instead, it largely remains together as one piece.

Figure 4: The mangled PV panels in this picture illustrate the nature of broken solar panels; the glass cracks but the panel is still in one piece. Image Source: http://img.alibaba.com/photo/115259576/broken_solar_panel.jpg

PV panels constructed with the same basic components as modern panels have been installed across the globe for well over thirty years.[3] The long-term durability and performance demonstrated over these decades, as well as the results of accelerated lifetime testing, helped lead to an industry-standard 25-year power production warranty for PV panels. These power warranties warrant a PV panel to produce at least 80% of their original nameplate production after 25 years of use. A recent SolarCity and DNV GL study reported that today's quality PV panels should be expected to reliably and efficiently produce power for thirty-five years.[4]

Local building codes require all structures, including ground mounted solar arrays, to be engineered to withstand anticipated wind speeds, as defined by the local wind speed requirements. Many racking products are available in versions engineered for wind speeds of up to 150 miles per hour, which is significantly higher than the wind speed requirement anywhere in North Carolina. The strength of PV mounting structures were demonstrated during Hurricane Sandy in 2012 and again during Hurricane Matthew in 2016. During Hurricane Sandy, the many large-scale solar facilities in New Jersey and New York at that time suffered only minor damage.[5] In the fall of 2016, the US and Caribbean experienced destructive winds and torrential rains from Hurricane Matthew, yet one leading solar tracker manufacturer reported that their numerous systems in the impacted area received zero damage from wind or flooding.[6]

In the event of a catastrophic event capable of damaging solar equipment, such as a tornado, the system will almost certainly have property insurance that will cover the cost to cleanup and repair the project. It is in the best interest of the system owner to protect their investment against such risks. It is also in their interest to get the project repaired and producing full power as soon as possible. Therefore, the investment in adequate insurance is a wise business practice for the system owner. For the same

reasons, adequate insurance coverage is also generally a requirement of the bank or firm providing financing for the project.

1.2.2 Photovoltaic (PV) Technologies

a. Crystalline Silicon

This subsection explores the toxicity of silicon-based PV panels and concludes that they do not pose a material risk of toxicity to public health and safety. Modern crystalline silicon PV panels, which account for over 90% of solar PV panels installed today, are, more or less, a commodity product. The overwhelming majority of panels installed in North Carolina are crystalline silicon panels that are informally classified as Tier I panels. Tier I panels are from well-respected manufacturers that have a good chance of being able to honor warranty claims. Tier I panels are understood to be of high quality, with predictable performance, durability, and content. Well over 80% (by weight) of the content of a PV panel is the tempered glass front and the aluminum frame, both of which are common building materials. Most of the remaining portion are common plastics, including polyethylene terephthalate in the backsheet, EVA encapsulation of the PV cells, polyphenyl ether in the junction box, and polyethylene insulation on the wire leads. The active, working components of the system are the silicon photovoltaic cells, the small electrical leads connecting them together, and to the wires coming out of the back of the panel. The electricity generating and conducting components makeup less than 5% of the weight of most panels. The PV cell itself is nearly 100% silicon, and silicon is the second most common element in the Earth's crust. The silicon for PV cells is obtained by high-temperature processing of quartz sand (SiO_2) that removes its oxygen molecules. The refined silicon is converted to a PV cell by adding extremely small amounts of boron and phosphorus, both of which are common and of very low toxicity.

The other minor components of the PV cell are also generally benign; however, some contain lead, which is a human toxicant that is particularly harmful to young children. The minor components include an extremely thin antireflective coating (silicon nitride or titanium dioxide), a thin layer of aluminum on the rear, and thin strips of silver alloy that are screen-printed on the front and rear of cell.[7] In order for the front and rear electrodes to make effective electrical contact with the proper layer of the PV cell, other materials (called glass frit) are mixed with the silver alloy and then heated to etch the metals into the cell. This glass frit historically contains a small amount of lead (Pb) in the form of lead oxide. The 60 or 72 PV cells in a PV panel are connected by soldering thin solder-covered copper tabs from the back of one cell to the front of the next cell. Traditionally a tin-based solder containing some lead (Pb) is used, but some manufacturers have switched to lead-free solder. The glass frit and/or the solder may contain trace amounts of other metals, potentially including some with human toxicity such as cadmium. However, testing to simulate the potential for leaching from broken panels, which is discussed in more detail below, did not find a potential toxicity threat from these trace elements. Therefore, the tiny amount of lead in the grass frit and the solder is the only part of silicon PV panels with a potential to create a negative health impact. However, as described below, the very limited amount of lead involved and its strong physical and chemical attachment to other components of the PV panel means that even in worst-case scenarios the health hazard it poses is insignificant.

As with many electronic industries, the solder in silicon PV panels has historically been a lead-based solder, often 36% lead, due to the superior properties of such solder. However, recent advances in lead-free solders have spurred a trend among PV panel manufacturers to reduce or remove the lead in their panels. According to the 2015 Solar Scorecard from the Silicon Valley Toxics Coalition, a group that tracks environmental responsibility of photovoltaic panel manufacturers, fourteen companies (increased from twelve companies in 2014) manufacture PV panels certified to meet the European Restriction of

Hazardous Substances (RoHS) standard. This means that the amount of cadmium and lead in the panels they manufacture fall below the RoHS thresholds, which are set by the European Union and serve as the world's de facto standard for hazardous substances in manufactured goods.[8] The Restriction of Hazardous Substances (RoHS) standard requires that the maximum concentration found in any homogenous material in a produce is less than 0.01% cadmium and less than 0.10% lead, therefore, any solder can be no more than 0.10% lead.[9]

While some manufacturers are producing PV panels that meet the RoHS standard, there is no requirement that they do so because the RoHS Directive explicitly states that the directive does not apply to photovoltaic panels.[10] The justification for this is provided in item 17 of the current RoHS Directive: "The development of renewable forms of energy is one of the Union's key objectives, and the contribution made by renewable energy sources to environmental and climate objectives is crucial. Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources (4) recalls that there should be coherence between those objectives and other Union environmental legislation. Consequently, this Directive should not prevent the development of renewable energy technologies that have no negative impact on health and the environment and that are sustainable and economically viable."

The use of lead is common in our modern economy. However, only about 0.5% of the annual lead consumption in the U.S. is for electronic solder for all uses; PV solder makes up only a tiny portion of this 0.5%. Close to 90% of lead consumption in the US is in batteries, which do not encapsulate the pounds of lead contained in each typical automotive battery. This puts the lead in batteries at great risk of leaching into the environment. Estimates for the lead in a single PV panel with lead-based solder range from 1.6 to 24 grams of lead, with 13g (less than half of an ounce) per panel seen most often in the literature.[11] At 13 g/panel[12], each panel contains one-half of the lead in a typical 12-gauge shotgun shell. This amount equates to roughly 1/750th of the lead in a single car battery. In a panel, it is all durably encapsulated from air or water for the full life of the panel.[14]

As indicated by their 20 to 30-year power warranty, PV modules are designed for a long service life, generally over 25 years. For a panel to comply with its 25-year power warranty, its internal components, including lead, must be sealed from any moisture. Otherwise, they would corrode and the panel's output would fall below power warranty levels. Thus, the lead in operating PV modules is not at risk of release to the environment during their service lifetime. In extreme experiments, researchers have shown that lead can leach from crushed or pulverized panels.[15, 16] However, more real-world tests designed to represent typical trash compaction that are used to classify waste as hazardous or non-hazardous show no danger from leaching.[17, 18] For more information about PV panel end-of-life, see the Panel Disposal section.

As illustrated throughout this section, silicon-based PV panels do not pose a material threat to public health and safety. The only aspect of the panels with potential toxicity concerns is the very small amount of lead in some panels. However, any lead in a panel is well sealed from environmental exposure for the operating lifetime of the solar panel and thus not at risk of release into the environment.

b. Cadmium Telluride (CdTe) PV Panels

This subsection examines the components of a cadmium telluride (CdTe) PV panel. Research demonstrates that they pose negligible toxicity risk to public health and safety while significantly reducing the public's exposure to cadmium by reducing coal emissions. As of mid-2016, a few hundred MWs of

cadmium telluride (CdTe) panels, all manufactured by the U.S. company First Solar, have been installed in North Carolina.

Questions about the potential health and environmental impacts from the use of this PV technology are related to the concern that these panels contain cadmium, a toxic heavy metal. However, scientific studies have shown that cadmium telluride differs from cadmium due to its high chemical and thermal stability.[19] Research has shown that the tiny amount of cadmium in these panels does not pose a health or safety risk.[20] Further, there are very compelling reasons to welcome its adoption due to reductions in unhealthy pollution associated with burning coal. Every GWh of electricity generated by burning coal produces about 4 grams of cadmium air emissions.[21] Even though North Carolina produces a significant fraction of our electricity from coal, electricity from solar offsets much more natural gas than coal due to natural gas plants being able to adjust their rate of production more easily and quickly. If solar electricity offsets 90% natural gas and 10% coal, each 5-megawatt (5 MW_{AC}, which is generally 7 MW_{DC}) CdTe solar facility in North Carolina keeps about 157 grams, or about a third of a pound, of cadmium *out of* our environment.[22, 23]

Cadmium is toxic, but all the approximately 7 grams of cadmium in one CdTe panel is in the form of a chemical compound cadmium telluride,[24] which has $1/100^{th}$ the toxicity of free cadmium.[25] Cadmium telluride is a very stable compound that is non-volatile and non-soluble in water. Even in the case of a fire, research shows that less than 0.1% of the cadmium is released when a CdTe panel is exposed to fire. The fire melts the glass and encapsulates over 99.9% of the cadmium in the molten glass.[27]

It is important to understand the source of the cadmium used to manufacture CdTe PV panels. The cadmium is a byproduct of zinc and lead refining. The element is collected from emissions and waste streams during the production of these metals and combined with tellurium to create the CdTe used in PV panels. If the cadmium were not collected for use in the PV panels or other products, it would otherwise either be stockpiled for future use, cemented and buried, or disposed of.[28] Nearly all the cadmium in old or broken panels can be recycled which can eventually serve as the primary source of cadmium for new PV panels.[29]

Similar to silicon-based PV panels, CdTe panels are constructed of a tempered glass front, one instead of two clear plastic encapsulation layers, and a rear heat strengthened glass backing (together >98% by weight). The final product is built to withstand exposure to the elements without significant damage for over 25 years. While not representative of damage that may occur in the field or even at a landfill, laboratory evidence has illustrated that when panels are ground into a fine powder, very acidic water is able to leach portions of the cadmium and tellurium,[30] similar to the process used to recycle CdTe panels. Like many silicon-based panels, CdTe panels are reported (as far back ask 1998[31]) to pass the EPA's Toxic Characteristic Leaching Procedure (TCLP) test, which tests the potential for crushed panels in a landfill to leach hazardous substances into groundwater.[32] Passing this test means that they are classified as non-hazardous waste and can be deposited in landfills.[33, 34] For more information about PV panel end-of-life, see the Panel Disposal section.

There is also concern of environmental impact resulting from potential catastrophic events involving CdTe PV panels. An analysis of worst-case scenarios for environmental impact from CdTe PV panels, including earthquakes, fires, and floods, was conducted by the University of Tokyo in 2013. After reviewing the extensive international body of research on CdTe PV technology, their report concluded, "Even in the worst-case scenarios, it is unlikely that the Cd concentrations in air and sea water will exceed the environmental regulation values."[35] In a worst-case scenario of damaged panels abandoned on the ground, insignificant amounts of cadmium will leach from the panels. This is because this scenario is

much less conducive (larger module pieces, less acidity) to leaching than the conditions of the EPA's TCLP test used to simulate landfill conditions, which CdTe panels pass.[36]

First Solar, a U.S. company, and the only significant supplier of CdTe panels, has a robust panel take-back and recycling program that has been operating commercially since 2005.[37] The company states that it is "committed to providing a commercially attractive recycling solution for photovoltaic (PV) power plant and module owners to help them meet their module (end of life) EOL obligation simply, cost-effectively and responsibly." First Solar global recycling services to their customers to collect and recycle panels once they reach the end of productive life whether due to age or damage. These recycling service agreements are structured to be financially attractive to both First Solar and the solar panel owner. For First Solar, the contract provides the company with an affordable source of raw materials needed for new panels and presumably a diminished risk of undesired release of Cd. The contract also benefits the solar panel owner by allowing them to avoid tipping fees at a waste disposal site. The legal contract helps provide peace of mind by ensuring compliance by both parties when considering the continuing trend of rising disposal costs and increasing regulatory requirements.

c. CIS/CIGS and other PV technologies

Copper indium gallium selenide PV technology, often referred to as CIGS, is the second most common type of thin-film PV panel but a distant second behind CdTe. CIGS cells are composed of a thin layer of copper, indium, gallium, and selenium on a glass or plastic backing. None of these elements are very toxic, although selenium is a regulated metal under the Federal Resource Conservation and Recovery Act (RCRA).[38] The cells often also have an extremely thin layer of cadmium sulfide that contains a tiny amount of cadmium, which is toxic. The promise of high efficiency CIGS panels drove heavy investment in this technology in the past. However, researchers have struggled to transfer high efficiency success in the lab to low-cost full-scale panels in the field.[39] Recently, a CIGS manufacturer based in Japan, Solar Frontier, has achieved some market success with a rigid, glass-faced CIGS module that competes with silicon panels. Solar Frontier produces the majority of CIS panels on the market today.[40] Notably, these panels are RoHS compliant,[41] thus meeting the rigorous toxicity standard adopted by the European Union even thought this directive exempts PV panels. The authors are unaware of any completed or proposed utility-scale system in North Carolina using CIS/CIGS panels.

1.2.3 Panel End-of-Life Management

Concerns about the volume, disposal, toxicity, and recycling of PV panels are addressed in this subsection. To put the volume of PV waste into perspective, consider that by 2050, when PV systems installed in 2020 will reach the end of their lives, it is estimated that the global annual PV panel waste tonnage will be 10% of the 2014 global e-waste tonnage.[42] In the U.S., end-of-life disposal of solar products is governed by the Federal Resource Conservation and Recovery Act (RCRA), as well as state policies in some situations. RCRA separates waste into hazardous (not accepted at ordinary landfill) and solid waste (generally accepted at ordinary landfill) based on a series of rules. According to RCRA, the way to determine if a PV panel is classified as hazardous waste is the Toxic Characteristic Leaching Procedure (TCLP) test. This EPA test is designed to simulate landfill disposal and determine the risk of hazardous substances leaching out of the landfill.[43, 44, 45] Multiple sources report that most modern PV panels (both crystalline silicon and cadmium telluride) pass the TCLP test.[46, 47] Some studies found that some older (1990s) crystalline silicon panels, and perhaps some newer crystalline silicon panels (specifics are not given about vintage of panels tested), do not pass the lead (Pb) leachate limits in the TCLP test.[48, 49]

The test begins with the crushing of a panel into centimeter-sized pieces. The pieces are then mixed in an acid bath. After tumbling for eighteen hours, the fluid is tested for forty hazardous substances that all must be below specific threshold levels to pass the test. Research comparing TCLP conditions to conditions of damaged panels in the field found that simulated landfill conditions provide overly conservative estimates of leaching for field-damaged panels.[50] Additionally, research in Japan has found no detectable Cd leaching from cracked CdTe panels when exposed to simulated acid rain.[51]

Although modern panels can generally be landfilled, they can also be recycled. Even though recent waste volume has not been adequate to support significant PV-specific recycling infrastructure, the existing recycling industry in North Carolina reports that it recycles much of the current small volume of broken PV panels. In an informal survey conducted by the NC Clean Energy Technology Center survey in early 2016, seven of the eight large active North Carolina utility-scale solar developers surveyed reported that they send damaged panels back to the manufacturer and/or to a local recycler. Only one developer reported sending damaged panels to the landfill.

The developers reported at that time that they are usually paid a small amount per panel by local recycling firms. In early 2017, a PV developer reported that a local recycler was charging a small fee per panel to recycle damaged PV panels. The local recycling firm known to authors to accept PV panels described their current PV panel recycling practice as of early 2016 as removing the aluminum frame for local recycling and removing the wire leads for local copper recycling. The remainder of the panel is sent to a facility for processing the non-metallic portions of crushed vehicles, referred to as "fluff" in the recycling industry.[52] This processing within existing general recycling plants allows for significant material recovery of major components, including glass which is 80% of the module weight, but at lower yields than PV-specific recycling plants. Notably almost half of the material value in a PV panel is in the few grams of silver contained in almost every PV panel produced today. In the long-term, dedicated PV panel recycling plants can increase treatment capacities and maximize revenues resulting in better output quality and the ability to recover a greater fraction of the useful materials.[53] PV-specific panel recycling technologies have been researched and implemented to some extent for the past decade, and have been shown to be able to recover over 95% of PV material (semiconductor) and over 90% of the glass in a PV panel.[54]

A look at global PV recycling trends hints at the future possibilities of the practice in our country. Europe installed MW-scale volumes of PV years before the U.S. In 2007, a public-private partnership between the European Union and the solar industry set up a voluntary collection and recycling system called PV CYCLE. This arrangement was later made mandatory under the EU's WEEE directive, a program for waste electrical and electronic equipment.[55] Its member companies (PV panel producers) fully finance the association. This makes it possible for end-users to return the member companies' defective panels for recycling at any of the over 300 collection points around Europe without added costs. Additionally, PV CYCLE will pick up batches of 40 or more used panels at no cost to the user. This arrangement has been very successful, collecting and recycling over 13,000 tons by the end of 2015.[56]

In 2012, the WEEE Directive added the end-of-life collection and recycling of PV panels to its scope.[57] This directive is based on the principle of extended-producer-responsibility. It has a global impact because producers that want to sell into the EU market are legally responsible for end-of-life management. Starting in 2018, this directive targets that 85% of PV products "put in the market" in Europe are recovered and 80% is prepared for reuse and recycling.

The success of the PV panel collection and recycling practices in Europe provides promise for the future of recycling in the U.S. In mid-2016, the US Solar Energy Industry Association (SEIA) announced that they are starting a national solar panel recycling program with the guidance and support of many

leading PV panel producers.[58] The program will aggregate the services offered by recycling vendors and PV manufacturers, which will make it easier for consumers to select a cost-effective and environmentally responsible end-of-life management solution for their PV products. According to SEIA, they are planning the program in an effort to make the entire industry landfill-free. In addition to the national recycling network program, the program will provide a portal for system owners and consumers with information on how to responsibly recycle their PV systems.

While a cautious approach toward the potential for negative environmental and/or health impacts from retired PV panels is fully warranted, this section has shown that the positive health impacts of reduced emissions from fossil fuel combustion from PV systems more than outweighs any potential risk. Testing shows that silicon and CdTe panels are both safe to dispose of in landfills, and are also safe in worst case conditions of abandonment or damage in a disaster. Additionally, analysis by local engineers has found that the current salvage value of the equipment in a utility scale PV facility generally exceeds general contractor estimates for the cost to remove the entire PV system.[59, 60, 61]

1.2.4 Non-Panel System Components (racking, wiring, inverter, transformer)

While previous toxicity subsections discussed PV panels, this subsection describes the non-panel components of utility-scale PV systems and investigates any potential public health and safety concerns. The most significant non-panel component of a ground-mounted PV system is the mounting structure of the rows of panels, commonly referred to as "racking". The vertical post portion of the racking is galvanized steel and the remaining above-ground racking components are either galvanized steel or aluminum, which are both extremely common and benign building materials. The inverters that make the solar generated electricity ready to send to the grid have weather-proof steel enclosures that protect the working components from the elements. The only fluids that they might contain are associated with their cooling systems, which are not unlike the cooling system in a computer. Many inverters today are RoHS compliant.

The electrical transformers (to boost the inverter output voltage to the voltage of the utility connection point) do contain a liquid cooling oil. However, the fluid used for that function is either a non-toxic mineral oil or a biodegradable non-toxic vegetable oil, such as BIOTEMP from ABB. These vegetable transformer oils have the additional advantage of being much less flammable than traditional mineral oils. Significant health hazards are associated with old transformers containing cooling oil with toxic PCBs. Transfers with PCB-containing oil were common before PCBs were outlawed in the U.S. in 1979. PCBs still exist in older transformers in the field across the country.

Other than a few utility research sites, there are no batteries on- or off-site associated with utility-scale solar energy facilities in North Carolina, avoiding any potential health or safety concerns related to battery technologies. However, as battery technologies continue to improve and prices continue to decline we are likely to start seeing some batteries at solar facilities. Lithium ion batteries currently dominate the world utility-scale battery market, which are not very toxic. No non-panel system components were found to pose any health or environmental dangers.

1.4 Operations and Maintenance – Panel Washing and Vegetation Control

Throughout the eastern U.S., the climate provides frequent and heavy enough rain to keep panels adequately clean. This dependable weather pattern eliminates the need to wash the panels on a regular basis. Some system owners may choose to wash panels as often as once a year to increase production, but most in N.C. do not regularly wash any PV panels. Dirt build up over time may justify panel washing a few times over the panels' lifetime; however, nothing more than soap and water are required for this activity.

The maintenance of ground-mounted PV facilities requires that vegetation be kept low, both for aesthetics and to avoid shading of the PV panels. Several approaches are used to maintain vegetation at NC solar facilities, including planting of limited-height species, mowing, weed-eating, herbicides, and grazing livestock (sheep). The following descriptions of vegetation maintenance practices are based on interviews with several solar developers as well as with three maintenance firms that together are contracted to maintain well over 100 of the solar facilities in N.C. The majority of solar facilities in North Carolina maintain vegetation primarily by mowing. Each row of panels has a single row of supports, allowing sickle mowers to mow under the panels. The sites usually require mowing about once a month during the growing season. Some sites employ sheep to graze the site, which greatly reduces the human effort required to maintain the vegetation and produces high quality lamb meat.[62]

In addition to mowing and weed eating, solar facilities often use some herbicides. Solar facilities generally do not spray herbicides over the entire acreage; rather they apply them only in strategic locations such as at the base of the perimeter fence, around exterior vegetative buffer, on interior dirt roads, and near the panel support posts. Also unlike many row crop operations, solar facilities generally use only general use herbicides, which are available over the counter, as opposed to restricted use herbicides commonly used in commercial agriculture that require a special restricted use license. The herbicides used at solar facilities are primarily 2-4-D and glyphosate (Round-up®), which are two of the most common herbicides used in lawns, parks, and agriculture across the country. One maintenance firm that was interviewed sprays the grass with a class of herbicide known as a growth regulator in order to slow the growth of grass so that mowing is only required twice a year. Growth regulators are commonly used on highway roadsides and golf courses for the same purpose. A commercial pesticide applicator license is required for anyone other than the landowner to apply herbicides, which helps ensure that all applicators are adequately educated about proper herbicide use and application. The license must be renewed annually and requires passing of a certification exam appropriate to the area in which the applicator wishes to work. Based on the limited data available, it appears that solar facilities in N.C. generally use significantly less herbicides per acre than most commercial agriculture or lawn maintenance services.

2. Electromagnetic Fields (EMF)

PV systems do not emit any material during their operation; however, they do generate electromagnetic fields (EMF), sometimes referred to as radiation. EMF produced by electricity is non-ionizing radiation, meaning the radiation has enough energy to move atoms in a molecule around (experienced as heat), but not enough energy to remove electrons from an atom or molecule (ionize) or to damage DNA. As shown below, modern humans are all exposed to EMF throughout our daily lives without negative health impact. Someone outside of the fenced perimeter of a solar facility is not exposed to significant EMF from the solar facility. Therefore, there is no negative health impact from the EMF

produced in a solar farm. The following paragraphs provide some additional background and detail to support this conclusion.

Since the 1970s, some have expressed concern over potential health consequences of EMF from electricity, but no studies have ever shown this EMF to cause health problems.[63] These concerns are based on some epidemiological studies that found a slight increase in childhood leukemia associated with average exposure to residential power-frequency magnetic fields above 0.3 to 0.4 μT (microteslas) (equal to 3.0 to 4.0 mG (milligauss)). μT and mG are both units used to measure magnetic field strength. For comparison, the average exposure for people in the U.S. is one mG or 0.1 μT, with about 1% of the population with an average exposure in excess of 0.4 μT (or 4 mG).[64] These epidemiological studies, which found an association but not a causal relationship, led the World Health Organization's International Agency for Research on Cancer (IARC) to classify ELF magnetic fields as "possibly carcinogenic to humans". Coffee also has this classification. This classification means there is limited evidence but not enough evidence to designate as either a "probable carcinogen" or "human carcinogen". Overall, there is very little concern that ELF EMF damages public health. The only concern that does exist is for long-term exposure above 0.4 μT (4 mG) that may have some connection to increased cases of childhood leukemia. In 1997, the National Academies of Science were directed by Congress to examine this concern and concluded:

> "Based on a comprehensive evaluation of published studies relating to the effects of power-frequency electric and magnetic fields on cells, tissues, and organisms (including humans), the conclusion of the committee is that the current body of evidence does not show that exposure to these fields presents a human-health hazard. Specifically, no conclusive and consistent evidence shows that exposures to residential electric and magnetic fields produce cancer, adverse neurobehavioral effects, or reproductive and developmental effects."[65]

There are two aspects to electromagnetic fields, an electric field and a magnetic field. The electric field is generated by voltage and the magnetic field is generated by electric current, i.e., moving electrons. A task group of scientific experts convened by the World Health Organization (WHO) in 2005 concluded that there were no substantive health issues related to *electric* fields (0 to 100,000 Hz) at levels generally encountered by members of the public.[66] The relatively low voltages in a solar facility and the fact that electric fields are easily shielded (i.e., blocked) by common materials, such as plastic, metal, or soil means that there is no concern of negative health impacts from the electric fields generated by a solar facility. Thus, the remainder of this section addresses magnetic fields. Magnetic fields are not shielded by most common materials and thus can easily pass through them. Both types of fields are strongest close to the source of electric generation and weaken quickly with distance from the source.

The direct current (DC) electricity produced by PV panels produce stationary (0 Hz) electric and magnetic fields. Because of minimal concern about potential risks of stationary fields, little scientific research has examined stationary fields' impact on human health.[67] In even the largest PV facilities, the DC voltages and currents are not very high. One can illustrate the weakness of the EMF generated by a PV panel by placing a compass on an operating solar panel and observing that the needle still points north.

While the electricity throughout the majority of a solar site is DC electricity, the inverters convert this DC electricity to alternating current (AC) electricity matching the 60 Hz frequency of the grid. Therefore, the inverters and the wires delivering this power to the grid are producing non-stationary EMF, known as extremely low frequency (ELF) EMF, normally oscillating with a frequency of 60 Hz. This frequency is at the low-energy end of the electromagnetic spectrum. Therefore, it has less energy than

other commonly encountered types of non-ionizing radiation like radio waves, infrared radiation, and visible light.

The wide use of electricity results in background levels of ELF EMFs in nearly all locations where people spend time – homes, workplaces, schools, cars, the supermarket, etc. A person's average exposure depends upon the sources they encounter, how close they are to them, and the amount of time they spend there.[68] As stated above, the average exposure to magnetic fields in the U.S. is estimated to be around one mG or 0.1 μT, but can vary considerably depending on a person's exposure to EMF from electrical devices and wiring.[69] At times we are often exposed to much higher ELF magnetic fields, for example when standing three feet from a refrigerator the ELF magnetic field is 6 mG and when standing three feet from a microwave oven the field is about 50 mG.[70] The strength of these fields diminish quickly with distance from the source, but when surrounded by electricity in our homes and other buildings moving away from one source moves you closer to another. However, unless you are inside of the fence at a utility-scale solar facility or electrical substation it is impossible to get very close to the EMF sources. Because of this, EMF levels at the fence of electrical substations containing high voltages and currents are considered "generally negligible".[71, 72]

The strength of ELF-EMF present at the perimeter of a solar facility or near a PV system in a commercial or residential building is significantly lower than the typical American's average EMF exposure.[73, 74] Researchers in Massachusetts measured magnetic fields at PV projects and found the magnetic fields dropped to very low levels of 0.5 mG or less, and in many cases to less than background levels (0.2 mG), at distances of no more than nine feet from the residential inverters and 150 feet from the utility-scale inverters.[75] Even when measured within a few feet of the utility-scale inverter, the ELF magnetic fields were well below the International Commission on Non-Ionizing Radiation Protection's recommended magnetic field level exposure limit for the general public of 2,000 mG.[76] It is typical that utility scale designs locate large inverters central to the PV panels that feed them because this minimizes the length of wire required and shields neighbors from the sound of the inverter's cooling fans. Thus, it is rare for a large PV inverter to be within 150 feet of the project's security fence.

Anyone relying on a medical device such as pacemaker or other implanted device to maintain proper heart rhythm may have concern about the potential for a solar project to interfere with the operation of his or her device. However, there is no reason for concern because the EMF outside of the solar facility's fence is less than 1/1000 of the level at which manufacturers test for ELF EMF interference, which is 1,000 mG.[77] Manufacturers of potentially affected implanted devices often provide advice on electromagnetic interference that includes avoiding letting the implanted device get too close to certain sources of fields such as some household appliances, some walkie-talkies, and similar transmitting devices. Some manufacturers' literature does not mention high-voltage power lines, some say that exposure in public areas should not give interference, and some advise not spending extended periods of time close to power lines.[78]

3. Electric Shock and Arc Flash Hazards

There is a real danger of electric shock to anyone entering any of the electrical cabinets such as combiner boxes, disconnect switches, inverters, or transformers; or otherwise coming in contact with voltages over 50 Volts.[79] Another electrical hazard is an arc flash, which is an explosion of energy that can occur in a short circuit situation. This explosive release of energy causes a flash of heat and a shockwave, both of which can cause serious injury or death. Properly trained and equipped technicians and electricians know how to safely install, test, and repair PV systems, but there is always some risk of

injury when hazardous voltages and/or currents are present. Untrained individuals should not attempt to inspect, test, or repair any aspect of a PV system due to the potential for injury or death due to electric shock and arc flash, The National Electric Code (NEC) requires appropriate levels of warning signs on all electrical components based on the level of danger determined by the voltages and current potentials. The national electric code also requires the site to be secured from unauthorized visitors with either a six-foot chain link fence with three strands of barbed wire or an eight-foot fence, both with adequate hazard warning signs.

4. Fire Safety

The possibility of fires resulting from or intensified by PV systems may trigger concern among the general public as well as among firefighters. However, concern over solar fire hazards should be limited because only a small portion of materials in the panels are flammable, and those components cannot self-support a significant fire. Flammable components of PV panels include the thin layers of polymer encapsulates surrounding the PV cells, polymer backsheets (framed panels only), plastic junction boxes on rear of panel, and insulation on wiring. The rest of the panel is composed of non-flammable components, notably including one or two layers of protective glass that make up over three quarters of the panel's weight.

Heat from a small flame is not adequate to ignite a PV panel, but heat from a more intense fire or energy from an electrical fault can ignite a PV panel.[80] One real-world example of this occurred during July 2015 in an arid area of California. Three acres of grass under a thin film PV facility burned without igniting the panels mounted on fixed-tilt racks just above the grass.[81] While it is possible for electrical faults in PV systems on homes or commercial buildings to start a fire, this is extremely rare.[82] Improving understanding of the PV-specific risks, safer system designs, and updated fire-related codes and standards will continue to reduce the risk of fire caused by PV systems.

PV systems on buildings can affect firefighters in two primary ways, 1) impact their methods of fighting the fire, and 2) pose safety hazard to the firefighters. One of the most important techniques that firefighters use to suppress fire is ventilation of a building's roof. This technique allows superheated toxic gases to quickly exit the building. By doing so, the firefighters gain easier and safer access to the building, Ventilation of the roof also makes the challenge of putting out the fire easier. However, the placement of rooftop PV panels may interfere with ventilating the roof by limiting access to desired venting locations.

New solar-specific building code requirements are working to minimize these concerns. Also, the latest National Electric Code has added requirements that make it easier for first responders to safely and effectively turn off a PV system. Concern for firefighting a building with PV can be reduced with proper fire fighter training, system design, and installation. Numerous organizations have studied fire fighter safety related to PV. Many organizations have published valuable guides and training programs. Some notable examples are listed below.

- The International Association of Fire Fighters (IAFF) and International Renewable Energy Council (IREC) partnered to create an online training course that is far beyond the PowerPoint click-and-view model. The self-paced online course, "Solar PV Safety for Fire Fighters," features rich video content and simulated environments so fire fighters can practice the knowledge they've learned. www.iaff.org/pvsafetytraining
- Photovoltaic Systems and the Fire Code: Office of NC Fire Marshal
- Fire Service Training, Underwriter's Laboratory

- Firefighter Safety and Response for Solar Power Systems, National Fire Protection Research Foundation
- Bridging the Gap: Fire Safety & Green Buildings, National Association of State Fire Marshalls
- Guidelines for Fire Safety Elements of Solar Photovoltaic Systems, Orange County Fire Chiefs Association
- Solar Photovoltaic Installation Guidelines, California Department of Forestry & Fire Protection, Office of the State Fire Marshall
- PV Safety & Firefighting, Matthew Paiss, Homepower Magazine
- PV Safety and Code Development: Matthew Paiss, Cooperative Research Network

Summary

The purpose of this paper is to address and alleviate concerns of public health and safety for utility-scale solar PV projects. Concerns of public health and safety were divided and discussed in the four following sections: (1) Toxicity, (2) Electromagnetic Fields, (3) Electric Shock and Arc Flash, and (4) Fire. In each of these sections, the negative health and safety impacts of utility-scale PV development were shown to be negligible, while the public health and safety benefits of installing these facilities are significant and far outweigh any negative impacts.

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Published by the N.C. Clean Energy Technology Center at N.C. State University

Exhibit E

Isle of Wight Broadband Expansion

Cavalier Solar - Isle of Wight Broadband Expansion

Cavalier Solar is seeking to provide a grant to Ruralband to expand and speed up the deployment in the vicinity of the Cavalier Solar project which is located in Surry and Isle of Wight County.

Target area:

Target Households: minimum 150-300

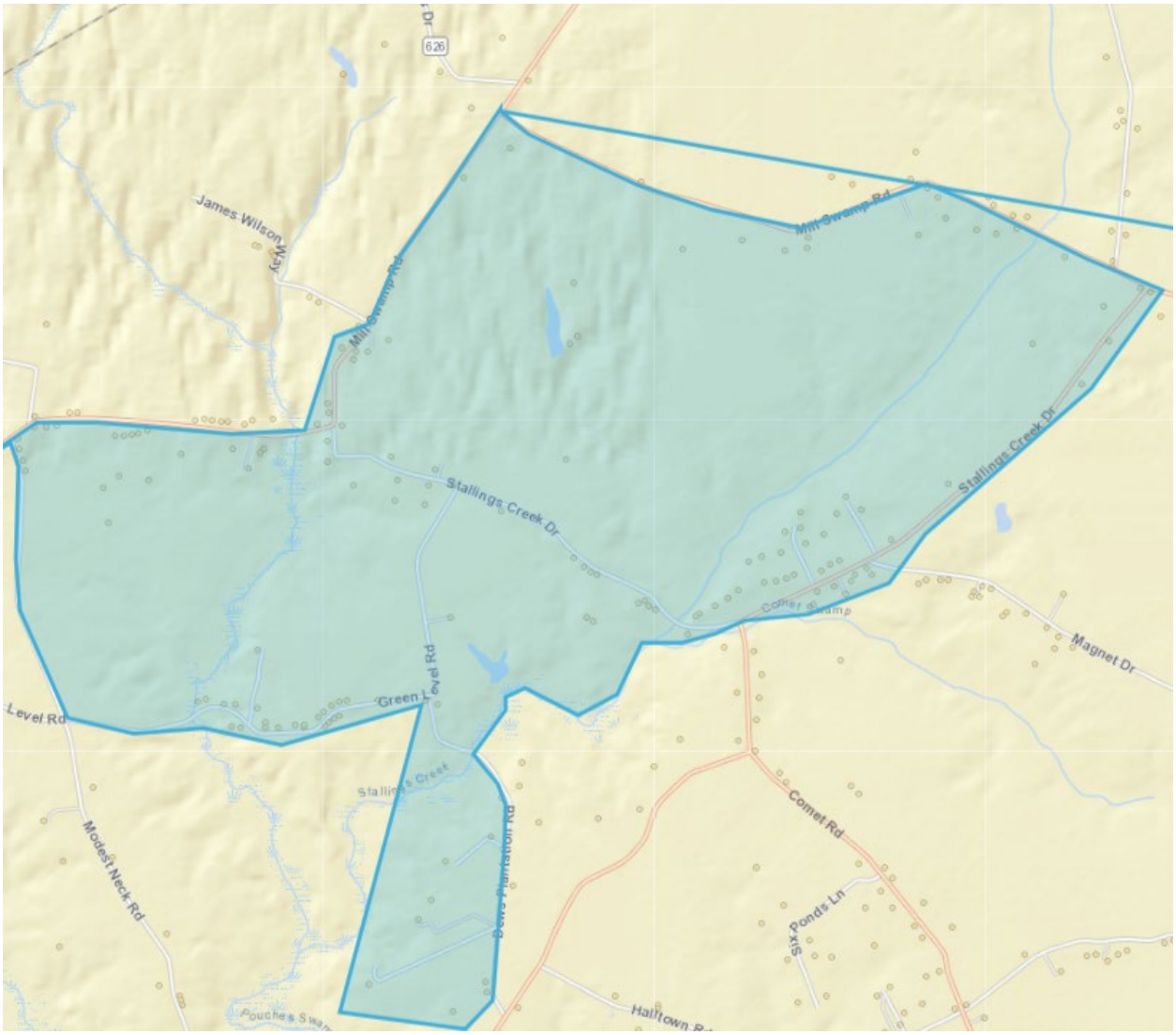
Target Grant: $100,000- 200,000

Next Steps: Set up meeting with Isle of Wight and Ruralband to coordinate on target area and determine grant amount needed to reach maximum household in project vicinity. Unfortunately, due to the recent ice storm and resulting system repair requrements, RuralBand has stated they are unable to meet until April. Cavalier Solar will setup meeting in early April to establish a Memorandum of Agreement between the three parties to solidify broadband expansion commitments.

Rural Band - Initial Estimate of Coverage for $100,000 grant:

> *2. Pertaining to Broadband Assistance for area residence*
> *a. PGEC Enterprises is willing to discuss an agreement in which will expand access in the area.*
> *b. 100K Contribution: This contribution would provide for **130 residents** in the Mill Swamp/Stallings Creek are to have broadband access. (See attached map of area) The number of citizens in this area is derived from census data.*

Initial coverage area reviewed by Ruralband in project vicinity.



Timeline:

- Initiated discussions with Prince George Electric Cooperative
  - See attached 10/27/20 email to Renee Chapline
- Communication with RuralBand and Estimate Received
  - See attached 12/22/20 email chain with Prince George Elec-Coop (RuralBand)
- Communication with Don Robertson
  - See attached 2/11/2021 email with Don Robertson
- Communication with Sarat (Ruralband) on March 2021 Meeting
  - See attached 3/3/2021 email with Sarat Yellepeddi (RuralBand)

Timeline Attachments

From: Ben Saunders
To: rchapline@pgec.coop
Subject: Cavalier Solar - Broadband installation
Date: Tuesday, October 27, 2020 11:37:00 AM
Attachments: Cavalier Solar Substation.kmz
Cavalier Project area.kmz
Exhibit E - Preliminary Layout.pdf

Ms. Chapline,

As a follow up to our call yesterday, here are some additional project details. See attached KMZ of the substation location and the general project area. In terms of timeline, we are looking to bring the project online by the end of 2022 and would like to have fiber to the substation by fall of 2022. Additionally, we would like to understand what the options/cost/timeline for installing additional fiber along the main roads in and adjacent to the project. Would a cost share option be available? Would that impact the installation schedule? Also, what is the current installation schedule for this area?

Please let me know if you need additional information or have any questions.

Thanks and I look forward to working with you.

Ben Saunders | Senior Manager, Solar Development
M: 804.212.7179
4200 Innslake Drive Suite 302 Glen Allen, VA 23060

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From: Harold Chambers
To: Ben Saunders; Sarat Yellepeddi
Cc: Casey Logan
Subject: RE: External:RE: External:RE: Cavalier Solar - Broadband installation
Date: Tuesday, December 22, 2020 2:22:56 PM
Attachments: image001.png
Cavalier .PNG

Ben, below you will find PGEC response.

1. Pertaining to the high speed internet service
    a. PGEC Enterprises LLC can provide up to one GIG speed at the requested location prior to the end of Q3 2022 (October).
    b. Aid to construction cost will not exceed $ 5,000.00 to deploy and connect fiber cable.
    c. Service Level Package TBD at a later date. Monthly cost for service level package varies depending on the package selected.
2. Pertaining to Broadband Assistance for area residence
    a. PGEC Enterprises is willing to discuss an agreement in which will expand access in the area.
    b. 100K Contribution: This contribution would provide for 130 residents in the Mill Swamp/Stallings Creek are to have broadband access. (See attached map of area) The number of citizens in this area is derived from census data.

I am available to answer any further questions you may have pertaining to this mater.

Lane Chambers
Manager of Engineering
Prince George Electric Cooperative
7103 General Mahone Highway
PO Box 168
Waverly, Virginia 23890-0168

Email; hchambers@pgec.coop
Phone;(804)834-2424 EXT1019
Mobile; (804)731-7422

From: Ben Saunders <ben.saunders@spower.com>
Sent: Tuesday, December 22, 2020 10:39 AM
To: Harold Chambers <HChambers@pgec.coop>; Sarat Yellepeddi <SYellepeddi@pgec.coop>
Cc: Casey Logan <CLogan@pgec.coop>
Subject: External:RE: External:RE: Cavalier Solar - Broadband installation

For intended use, I'm looking at two functions.

First, we will need fiber at our collector substation which will be located slightly North of the Dominion Septa substation located on Mill Swamp Rd. This fiber will be used to connect to our operations center in Salt Lake City and monitor the facility. I'm not sure if we would need to lease a strand but we definitely need a dedicated high speed internet connection.

Second, I would like to know if there is an opportunity for sPower to financially assist with the expansion of broadband to residences adjacent to the site and if so, what that cost would be. Ie: if we contributed $100k, what would that get us?

Thanks for the help on this.

Ben Saunders
M: 804.212.7179

From: Harold Chambers <HChambers@pgec.coop>
Sent: Tuesday, December 22, 2020 10:19 AM
To: Ben Saunders <ben.saunders@spower.com>; Sarat Yellepeddi <SYellepeddi@pgec.coop>
Cc: Casey Logan <CLogan@pgec.coop>
Subject: RE: External:RE: Cavalier Solar - Broadband installation

Ben, before providing a final cost estimate I would like to understand the intended use of the fiber service.

1. Will you be in the market to lease a strand or strands of fiber.
2. Will the intent be for Prince George Electric Enterprises LLC to provide a total service to the station site. Are you looking for an internet connection?

Lane Chambers
Manager of Engineering
Prince George Electric Cooperative
7103 General Mahone Highway
PO Box 168
Waverly, Virginia 23890-0168

Email; hchambers@pgec.coop
Phone;(804)834-2424 EXT1019
Mobile; (804)731-7422

From: Harold Chambers
Sent: Thursday, December 17, 2020 1:19 PM
To: Ben Saunders <ben.saunders@spower.com>; Sarat Yellepeddi <SYellepeddi@pgec.coop>
Cc: Casey Logan <CLogan@pgec.coop>
Subject: RE: External:RE: Cavalier Solar - Broadband installation

Ben, I have been out to conduct some field verification, I am in the process of developing an aid to

construction estimate. I have all intentions of having this cost estimate for construction to you the fist of next week. Thank you for your patience and your interest in working with us on this project.

Lane Chambers
Manager of Engineering
Prince George Electric Cooperative
7103 General Mahone Highway
PO Box 168
Waverly, Virginia 23890-0168

Email; hchambers@pgec.coop
Phone;(804)834-2424 EXT1019
Mobile; (804)731-7422

From: Ben Saunders <ben.saunders@spower.com>
Sent: Thursday, December 17, 2020 11:51 AM
To: Harold Chambers <HChambers@pgec.coop>; Sarat Yellepeddi <SYellepeddi@pgec.coop>
Cc: Casey Logan <CLogan@pgec.coop>
Subject: External:RE: Cavalier Solar - Broadband installation

Hello, just checking in on this to see if there's been any progress. I could really use some ballpark numbers just to see if this is an option for our project.

I look forward to hearing from you.

Ben Saunders
M: 804.212.7179

From: Harold Chambers <HChambers@pgec.coop>
Sent: Tuesday, November 17, 2020 11:44 AM
To: Sarat Yellepeddi <SYellepeddi@pgec.coop>; Ben Saunders <ben.saunders@spower.com>
Cc: Casey Logan <CLogan@pgec.coop>
Subject: RE: Cavalier Solar - Broadband installation

Ben, I wanted to reach out to let you know we are continuing to collect date for this project to ensure further discussion will be more productive. I anticipate the opportunity to open further discussion within the next couple of weeks.

Lane Chambers

Manager of Engineering

Prince George Electric Cooperative

7103 General Mahone Highway

PO Box 168

Waverly, Virginia 23890-0168

Email; hchambers@pgec.coop

Phone;(804)834-2424 EXT1019

Mobile; (804)731-7422

From: Sarat Yellepeddi <SYellepeddi@pgec.coop>
Sent: Thursday, November 12, 2020 1:23 PM
To: Ben Saunders <ben.saunders@spower.com>
Cc: Casey Logan <CLogan@pgec.coop>; Harold Chambers <HChambers@pgec.coop>
Subject: Cavalier Solar - Broadband installation

Good afternoon Ben. Renee is no longer with PGEC and moving forward any questions should be directed to me/Harold (Lane). We appreciate you sharing your data.

We will internally evaluate the details and get back to you. Hope we can have conversation after that.

Please reach back to the group in next 3-4 weeks to circle back.

Thanks,
Sarat

Chief Operations Officer

O: 804-834-2424 x 1136

M: 804-895-2855

Prince George Electric Cooperative

7103 General Mahone Highway

Mail: PO Box 168

Waverly, Virginia 23890

From: Ben Saunders <ben.saunders@spower.com>
Sent: Thursday, November 12, 2020 1:03 PM
To: Casey Logan <CLogan@pgec.coop>; Sarat Yellepeddi <SYellepeddi@pgec.coop>
Subject: External:FW: Cavalier Solar - Broadband installation

Hello,

I had a previous discussion with Renee Chapline about trying to extend broadband into southern Surry and Northern Isle of Wight for a solar project. I'm trying to determine if there is cost share structure that we could contribute to and what those costs might be.

Please let me know who I need to speak to about this.

Thanks,

Ben Saunders

M: 804.212.7179

From: Ben Saunders
Sent: Tuesday, October 27, 2020 11:38 AM
To: rchapline@pgec.coop
Subject: Cavalier Solar - Broadband installation

Ms. Chapline,

As a follow up to our call yesterday, here are some additional project details. See attached KMZ of the substation location and the general project area. In terms of timeline, we are looking to bring the project online by the end of 2022 and would like to have fiber to the substation by fall of 2022. Additionally, we would like to understand what the options/cost/timeline for installing additional fiber along the main roads in and adjacent to the project. Would a cost share option be available? Would that impact the installation schedule? Also, what is the current installation schedule for this area?

Please let me know if you need additional information or have any questions.

Thanks and I look forward to working with you.

Ben Saunders | Senior Manager, Solar Development

M: 804.212.7179

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From: Donald T. Robertson
To: Ben Saunders
Subject: RE: Cavalier Solar - Broadband
Date: Thursday, February 11, 2021 4:07:40 PM
Attachments: image001.png

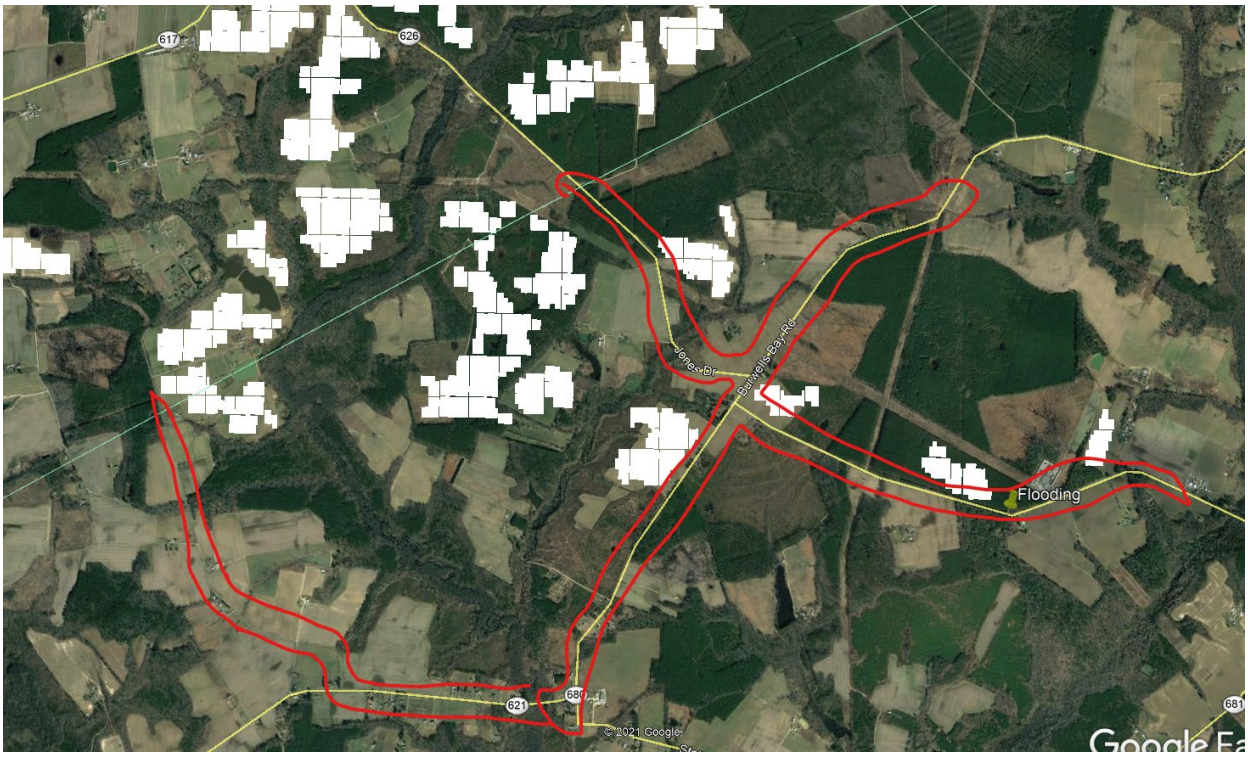
If we don't get state grant assistance, it could be a while before broadband is extended to this part of the County because otherwise it is cost prohibitive to most providers. We certainly have an interest in getting broadband to residents in areas of our County like this.

Don

From: Ben Saunders <ben.saunders@spower.com>
Sent: Monday, February 8, 2021 9:13 AM
To: Donald T. Robertson <droberts@isleofwightus.net>
Subject: RE: Cavalier Solar - Broadband

As discussed, these are the areas in Isle of Wight I was looking at. I'm flexible if we want to extend them further if it makes sense.

Let me know your thoughts.



Ben Saunders
M: 804.212.7179

From: Ben Saunders
Sent: Friday, February 5, 2021 2:26 PM
To: droberts@isleofwightus.net
Cc: Brian Carroll <bcarroll@isleofwightus.net>
Subject: Cavalier Solar - Broadband

Mr. Robertson,

I'm following up on a voicemail I just left you. I'm the lead developer for the Cavalier Solar project which is proposed in the north end of Isle of Wight as shown on the attached conceptual site plan.

Our project would require broadband access at our collector substation which is located just north of the Dominion Energy Septa Substation that's on Mill Swamp Rd. (Rt. 626).

I've been in discussions with Prince George Elec Coop (Ruralband) about extending broadband to the substation site but also seeing if there would be options for sPower to financially assist in expanding broadband along roads adjacent to the project site. I know that access to internet is a huge issue for residents in this area. The numbers and expansion area potential Prince George have given me so far are encouraging and I would like to get IOW involved to see if we can bring this to fruition.

Mr. Carroll suggested I speak with you about the current county efforts to expand broadband and see if you can give me any insights into this part of the county.

Hope to hear from you soon.

Citrix Attachments — Expires August 4, 2021

2021-02-02_Cavalier_IOW Site Plan.pdf — 18.6 MB

Download Attachments

Ben Saunders uses Citrix Files to share documents securely.

Ben Saunders | Senior Manager, Solar Development
M: 804.212.7179
4200 Innslake Drive Suite 302 Glen Allen, VA 23060

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From:	Sarat Yellepeddi
To:	Ben Saunders
Cc:	Donald T. Robertson; Lee Chappell; Jeremy Orn
Subject:	Re: External:Cavalier Solar - Broadband installation in Isle of Wight
Date:	Wednesday, March 3, 2021 6:19:27 PM

Evening Ben. Due to recent storm events and Covid contract tracking we are literally dealing with skeleton crews. My suggestion is to regroup in April to settle down on the office situation. Hopefully you will understand the situation

Thanks,
Sarat Yellepeddi

From: Ben Saunders <ben.saunders@spower.com>
Sent: Wednesday, March 3, 2021 3:14:29 PM
To: Sarat Yellepeddi <SYellepeddi@pgec.coop>
Cc: Donald T. Robertson <droberts@isleofwightus.net>; Lee Chappell <LChappell@pgec.coop>
Subject: External:Cavalier Solar - Broadband installation in Isle of Wight

Sarat,

I'm following up on our conversation from late January about broadband installation in the project area for our proposed solar facility located in Isle of Wight County. I've spoke with Don Robertson with Isle of Wight (cc'ed) who is helping head the county development of broadband and he is interesting in moving this conversation forward.

I would like to get us on a quick call to discuss next steps and get something more formal in place to show Cavalier Solar's commitment to making this happen.

What's your availability for the rest of this week or early next week?

Thanks,

Ben Saunders | Senior Manager, Solar Development
M: 804.212.7179
4200 Innslake Drive Suite 302 Glen Allen, VA 23060

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Exhibit F

Cavalier Solar
Draft Decommissioning Plan and Cost Estimate

EXAMPLE PROJECT DECOMMISSIONING AND SITE RESTORATION PLAN
Cavalier Solar
4/26/21

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Attachment A – Conceptual Cost Estimate

Attachment B – DNV Decommissioning Review Letter

1.0 INITIAL PROJECT DECOMMISSIONING AND SITE RESTORATION PLAN

1.1 Introduction

The Cavalier Solar Project (Project) is a 240-Megawatt (MW) photovoltaic (PV) solar project located in Surry and Isle of Wight, Virginia. The Project is anticipated to operate for 35 years.

The Project will operate under a Conditional Use Permit with Isle of Wight and Surry. Following the life the Project, a decision would be made to extend the life of the Project or to decommission the Project. If the Project is decommissioned, AES or its successor in interest will be responsible for the removal, recycling, and disposal of all solar arrays, inverters, transformers and other structure on the Project site, depending upon the proposed future use of the Project site. AES anticipates using the best available recycling measures at the time of decommissioning.

1.2 Existing Land Use

The current and historic land use for the Project Site is silviculture and Agriculture. The area surrounding the Project site also include silviculture with limited agriculture and scattered single-family residences.

1.3 Proposed Land Use

The Project is being developed to provide clean, renewable energy to a utility off-taker. The Project consists of a 240 MW alternating current (AC) solar energy facility. All parcels within the Project site will be purchased by AES or its Transferee.

The Project will involve installation of various facilities, such as ground-mounted solar arrays, switchyard, inverters, electrical conduits, foundations, and an operations and maintenance facility. The majority of the foundations and electrical conduits will be located underground.

1.4 Objectives

This Decommissioning Plan was developed per Section 5-5003.4 of the Isle of Wight County Ordinance. The Decommissioning Plan ensures that if the Project is decommissioned, the site restoration will be accomplished in a way this is environmentally sound, safe, and protects the public health and safety. Decommissioning is a general term used to describe a formal process to remove something from active status whereas restoration objectives aspire to return the land to some degree of its former state, after some process has resulted in its disturbance.

Future conditions that could affect decommissioning are largely unknown at this time; however, the best available technologies and management practices will be deployed to ensure successful project decommissioning and site restoration.

To ensure that decommissioning will be completed in a manner that is environmentally sound, safe, and protects public health and safety, AES or its successor in interest will submit a Final Plan for Project Decommissioning to Surry and Isle of Wight County for review and approval before project construction and again before the Project's decommissioning begins. Overall, the plan will include a discussion of:

- Proposed decommissioning activities for the Project and all appurtenant facilities that were constructed as part of the Project;
- The activities necessary to restore the Project site if the plan requires removal of equipment and appurtenant facilities; and
- Decommissioning alternatives at the time of final decommissioning.

Satisfying the above requirements should serve as a safeguard, even in the unlikely event that the Project is abandoned.

1.5 Project Decommissioning

When the Project reaches the end of its operational life, the component parts will be dismantled and recycled. All waste resulting from the decommissioning of the facility will be transported by a certified and licensed contractor and taken to a landfill/recycling facility in accordance with all local, State, and federal regulations.

The Initial Project Decommissioning Plan for the project site will include the following:

- The facility will be disconnected from the utility power grid.
- Individual PV panels will be disconnected from the on-site electrical system.
- Project components will be dismantled and removed using conventional construction equipment and recycled or disposed of safely.
- Individual PV panels will be unbolted and removed from the support frames and carefully packaged for collection and return to a designated recycling facility for recycling and material re-use.
- Electrical interconnection, transmission, and distribution cables will be removed and recycled offsite by an approved recycling facility.
- PV Panel support steel and support posts will be removed and recycled off-site by an approved metals recycler.
- Electrical and electronic devices, including inverters, transformers, panels, support structures, lighting fixtures, and their protective shelters will be recycled off-site by an approved recycler.

- Any hazardous materials will be removed and disposed in accordance with the current regulations.

- All concrete that is removed from the switchyard and on-site distribution system will be recycled off-site by a concrete recycler or crushed on site and used as fill material.

- Fencing will be removed and recycled off-site by an approved metals recycler.

- Soil erosion and sedimentation control measures will be re-implemented during the decommissioning period and until the site is stabilized.

- Only minimal grading is expected to be required.

1.6 Site Restoration

Restoration activities will return the Project site to a land use consistent with the surrounding land uses at the time of decommissioning. The Initial Site Restoration Plan for the Project Site will include the following:

- Existing wells or pumps located on the periphery of the Project Site will be maintained in place. Any ditches used for temporary water transport within the Project Site will be removed for the Project. These irrigation works will be restored if appropriate or necessary.

- Restoration activities would entail one of the following measures:

    - If land is to be used for silviculture use, the nutrient content of the soil would be restored to pre-construction concentration levels (if degraded) and the land would be tilled regularly to ensure aeration of soils and proper weed management; or

    - If the land is to be converted for another purpose, soil stabilization techniques would be deployed to prevent topsoil erosion. Conversion to another use consistent with applicable land use regulation in effect at that time.

- All permits related to restoration would be obtained where required

1.7 Estimated Costs

AES or Transferee will provide financial security for the performance of its decommissioning and restoration obligations based on the Initial Decommissioning and Site Restoration Plan. A decommissioning cost estimate was prepared and submitted for third-party industry review, which are included as Attachment A and B, respectively. The cost estimate will be used to determine the value of the Performance Bond to ensure that the funds will be available for decommissioning and site restoration (see Section 3.0).

2.0 FINAL PROJECT DECOMMISSIONING AND SITE RESTORATION PLAN \

2.1 Final Project Decommissioning and Site Restoration Plan

Ninety days (90) prior to decommissioning the Project Site, AES will submit a Final Project Decommissioning and Site Restoration Plan (Final Plan) to the County for its approval, which approval will not be unreasonably withheld. The Final Plan may contain measures to decommission the Project and restore the Project Site different than the Initial Plan, provided that AES explains in sufficient detail the reasons for any new or substantially different measures.

2.2 Decommissioning and Restoration: Scope and Timing

2.2.1 Scope of Decommissioning

Decommissioning the Project will involve removal of the Project's components as necessary for reuse of the site, including; the solar panels, panel trackers, anchors, supports and mounts, inverter buildings, electrical conductors, electrical cables, and substation components, other structures and the re-grading, backfilling, and re-stabilizing of any areas significantly impacted by the removal of any components. It is anticipated that internal roads will be left in place to facilitate the future landowner's use after decommissioning. Landscaped vegetative buffers will be left in place as part of the decommissioning.

Noise impacts from decommissioning activities are expected to be less than the impacts described in the submitted noise study for the construction phase due to the absence of multiple construction activities and associated equipment, such as grading, but most notably the largest noise impact: pneumatic pile-driving.

2.2.2 Decommissioning Work Hours

Decommissioning of the Project will adhere to the work hours and time of day considerations applicable for construction described in the County Ordinances in effect at that time. Typical work week would be Monday-Friday 7:00-5:00pm.

2.2.3 Decommissioning Phasing Plan

A phasing plan for site decommissioning and restoration can be developed once the final site layout is determined during the site planning stage. The plan will include phasing, material staging locations, truck routes, and information regarding recycling and disposal activities. It is not anticipated that PV materials will be stored on site between decommissioning and removal from the site to the end-user as decommissioned panels are removed by hand and go from the array to the export truck. Panels would typically be exported by trucks including covered semi-trailer trucks and semi-flatbed cargo trucks. Other material, such as metal post and wiring may be transported by semi-trucks or refuse trucks for recycling. Vehicles would utilize all legal access points and would utilize the traffic plan developed specifically for the project site.

2.2.4 Site Restoration

Restoration of the Project Site will be to a reasonable approximation of its original condition prior to construction

The site restoration will not include the removal of gravel access roads/paths or stream crossings.

Removal of existing, fully permitted access roads would create additional land and wetlands disturbance that is not required nor recommended by any regulatory agencies. All crossings will be permitted and will remain in place.

Site decommissioning will utilize existing roadway for the solar equipment removal and will not cause heavy traffic outside the roadway that will compact soils. Furthermore, it would not be prudent to destabilize the site and create potential erosion issues on the land. At the time of decommissioning AES reserves the right to develop the land as desired and in compliance with current zoning and development regulations.

If existing underground conduits are removed, the ground will be restored to the existing topography and ground cover re accordance with any applicable permitting requirements.

2.2.5 Timing, Exemptions, and Extension

AES or any Transferee will decommission the Project and restore the Project Site within twelve (12) months following project termination. The twelve-month period to perform the decommissioning and restoration may be extended for one additional twelve-month period if there is a delay caused by forces beyond the control of AES including, but not limited to, inclement weather conditions, planting requirements, equipment failure, wildlife considerations or the availability of equipment or personnel to support decommissioning.

2.2.6 County Access and Reporting

The County will be granted access to the Project Site during decommissioning of the Project for purposes of inspecting any decommissioning work or to perform decommissioning evaluations. County personnel must provide a 5-day pre-notification for site access on the Project Site and must observe all current owner safety standards and protocols. If requested by the County, AES will provide monthly status reports until this decommissioning work is completed.

Documentation (manifests) will be provided from the recycling and disposal sites which shall include descriptions and quantities of materials delivered.

2.2.7 Solar Panel End-of-Life Use and Recycling

Studies show the value of the recovered materials can cover the expense of decommissioning and recycling making recycling of PV at the end of their useful life a profitable enterprise.

Furthermore, studies of large-scale penetration of PV into global electricity grids show that recycling of PV modules is imperative for maintaining a secondary source of materials[1].

End-of-life disposal of solar products in the US is governed by the Federal Resource Conservation and Recovery Act (RCRA), and state policies that govern waste. Panels removed from the site will be recycled according to the means, methods, and regulations at the time of decommissioning. Presently, there are numerous companies that recycle solar panels including First Solar, Dynamic Life Cycle Innovations, Cleanlites Recycling, and Clean Harbors.

It is also worth noting that the panels pass the Environmental Protection Agency (EPA) Toxicity Characterization Leachate Profile (TCLP), which characterizes the leaching potential of metals in landfills. This means, should panel recycling options be unavailable in the future for whatever reason, traditional, non-hazardous landfills would be an option for disposal.

3.0 RESPONSIBLE DECOMMISSIONING PARTY CONTACTS

Points of contact for Project Decommissioning:

Contact	Group	Title	Phone	Email
Ben Saunders	AES	Project Developer	804.212.7179	ben.saunders@AES.com
Tony Archibald	AES	Project Manager	801.913.0780	tony.archibald@AES.com

The above contact person(s) should be reviewed and re-evaluated every two (2) years along with the Initial Plan to assure they are up to date, relevant, and appropriate to serve as points of contract regarding decommissioning.

4.0 DECOMMISSIONING AND RESTORATION FUNDING AND SECURITY

4.1 Decommissioning and Restoration Obligations

AES or a Transferee will post a Performance Bond as described in 3.2 below to ensure the availability of funds to cover AES decommissioning and restoration obligations. AES will deliver the Performance Bond to each County after receipt of the Conditional Use Permit and prior to the start of construction. The Initial Plan, to be completed by AES will include the estimated costs for the Project's potential decommissioning and restoration obligations. The Initial Plan also will provide that such estimated costs will be re-evaluated by AES at the conclusion of construction of the Project and every two (2) years thereafter from the date of Substantial Completion to ensure sufficient funds for decommissioning and restoration and, if deemed appropriate at that time, the amount of the Performance Bond will be adjusted accordingly.

4.2 Performance Bond

[1] -Fthenakis V.M., Sustainability metrics for extending thin-film photovoltaics to terawatt levels. MRS Bulletin, 37(4), 425-430, 2012

AES will provide financial security for the performance of its Decommissioning and Restoration obligations assuming the Project Site is restored to silviculture and agricultural use through a Performance Bond issued by a surety registered with the Virginia Commissioner of Insurance and is, at the time of delivery of the bond, is on the authorized insurance provider list published by the Commissioner. The Performance Bond will be in an amount equal to 100% of the estimated costs for AES decommissioning and restoration obligations provided in the Initial Plan. The Performance Bond will be for a term of one (1) year, and will be continuously renewed, extended, or replaced so that it remains in effect for the remaining term of the agreement or until the secured decommissioning obligations are satisfied, whichever occurs later.

5.0 PROJECT DECOMMISSIONING AND SITE RESTORATION COST ESTIMATE

An estimated cost for the decommissioning and restoration associated with the Isle of Wight portion of the Cavalier Solar project are shown below:

Description	Labor, Equipment, Materials	Net Recycling / Resale Value in Year 1*	Total Cost
SWPPP & Dust Control Measures	$57,087	$0	$57,087
Removal of Equipment	$4,402,482	($9,997,762)	($5,595,280)
Site Reclamation	$485,328	$0	$485,328
Contingency, Escalation, PM, Insurance, Fees	$1,969,404	$0	$1,969,404
Opinion of Probable Gross Decommissioning Cost	**$6,914,301**	($9,997,762)	($3,083,461)

				Spotsy - Estimate	Cavalier - Example Estimate
SWPPP & Dust Control Measures	QTY	Unit	Unit Cost	Labor/Equip/Mat Costs	
Stabilized Construction Entrance 1 (creation, maintenance and stabilizaion)	3	EA	7,500	$22,500	
Mobilization/DeMobilization	1	EA	140,160	$140,160	
Perimeter Silt Fencing	220,000	LF	0.24	$53,460	
Spill Kits (Emergency Equipment Cleanup)	1	EA	305	$305	
Street Wash Down (Water Truck, water incl.)	195	DA	665	$129,652	
Dust Control Watering (Water Truck, water incl.)	195	DA	665	$129,652	
Labor costs				incl. above	
SWPPP & Dust Control Subtotal				$475,729	$57,087
Equipment Removal	QTY	Unit		Labor/Equip/Mat Costs	
Remove Substation Step Up Transformer	6	EA	66,667	$400,000	
Remove Substation Disconnect Switches	12	EA	30,000	$360,000	
Remove Substation Circuit Breakers	12	EA	30,000	$360,000	
Remove Substation Pedestals	18	EA	60,444	$1,088,000	
Remove AC Conductor	550,426	LF	2	$1,089,843	
Remove Conduit	284,485	LF	1	$256,037	
Remove Switchgear Assemblies	1	LS	50,000	$50,000	
Remove Inverters & Xfmrs	196	LS	4,995	$978,922	
Remove DC Conductor	2,722,080	LF	0.19	$511,446	
Remove BLA	18,939	Rows	111	$2,109,430	
Remove Photovoltaic Modules	1,534,053	EA	5	$7,697,111	
Remove Support Assemblies	18,939	EA	116	$2,192,072	
Remove W6 x 7 x 11' Foundations	158,965	EA	4	$566,403	
Remove W6 x 9 x 11.5' Foundations	33,446	EA	17	$566,403	
Remove W6 x 12 x 9' Foundations	16,723	EA	17	$283,202	
Remove W6 x 20 x 11' Foundations	2,003	EA	17	$33,923	
Remove W6 x 7 x 11' Foundations	14,249	EA	17	$241,312	
Remove SCADA and Met Stations	28	EA	1,147	$32,116	
Remove 6' Chain Link Fence	324,500	LF	6	$2,028,125	
Remove Gates	45	EA	500	$22,500	
Remove Overhead AC Collection	48,009	LF	69	$3,320,810	
Trucking, Hauling, and Heavy Equipment	1		612,000	$612,000	
Labor costs				incl above.	
Equipment Removal Subtotal				$24,799,655	$2,975,959
Site Reclamation	QTY	Unit		Labor/Equip/Mat Costs	
Scarify & Blend ~40% of Site (Depth = 6")	1,480	AC	630	$932,400	
Seed Mixture across ~40% of Site (@ 25 LB/AC)	1,480	AC	1,600	$2,368,000	
Condition A.20 Soil Sampling program	46	LS	4,826	$222,000	
Site stabilization of disturbed land caused by decommissioning (water incl.)	1	LS	472,000	$472,000	
Traffic planning	1	LS	20,000	$20,000	
Traffic mitigation	1	LS	20,000	$20,000	
Road restoration costs	1	LS	10,000	$10,000	
Reclamation Subtotal				$4,044,400	$485,328
Contingency, Escalation, PM, Insurance, Fees	QTY	Unit		Labor/Equip/Mat Costs	
Subcontractor Bonding	0.91%	LS	24,641,429	$224,237	
General Contingency (% of Labor/Equip/Mat)	2.5%	LS	19,713,120	$492,828	
Labor & Equip. Escalation (2% per Year for 25 Years)	60%	LS	20,138,057	$12,082,834	
Recycled Material Escalation (0.6% per Year for 25 Years)	15%	LS	0.00		
Construction Management (% of Labor/Equip/Mat)	7.5%	LS	18,070,360	$1,355,277	
Permits, Inspection & Fees (% of Labor/Equip/Mat)	3.25%	LS	24,641,385	$800,845	
Liability Insurance (% of Labor/Equip/Mat)	0.69%	LS	24,641,449	$170,026	
Overhead & Profit (% of Labor/Equip/Mat)	4%	LS	24,641,400	$985,656	
County Administration Costs (Full-time for Contract Duration)	1	LS	50,000	$50,000	
Additional costs due to weather delays	1	LS	250,000	$250,000	
Contingency, Escalation, PM, Insurance & Fees Subtotal				$16,411,703	$1,969,404
Pre- Recycling/Resale, Decommissioning Gross Costs				$45,731,487	$5,487,778
Recycling of Equipment	QTY	Unit		Net Recylcing / Resale	
Recycle Substation Step Up Transformer	6	EA	300.00	$1,800	
Recycle Substation Disconnect Switches	12	EA	60.00	$720	
Recycle Substation Circuit Breakers	12	EA	300.00	$3,600	
Recycle Substation Pedestals	18	EA	-24.50	-$441	
Recycle Resale AC Conductor	550,426	LF	-1.26	-$693,537	
Recycle Conduit	284,485	LF	-1.26	-$358,451	
Recycle Switchgear Assemblies	1	LS	12.00	$12	
Recycle Inverters & Xfmrs	196	LS	92.00	-$18,032	
Recycle DC Conductor	2,722,080	LF	-0.05	-$125,216	
Recycle BLA	18,939	Row	-200.00	-$3,787,785	
Recycle Panels	76,703	EA	31.85	$2,442,991	
Recycle Support Assemblies	23,588	EA	-4.50	-$106,146	
Recycle W6 x 7 x 11' Foundations	158,965	EA	-10.64	-$1,691,387	
Recycle W6 x 9 x 11.5' Foundations	33,446	EA	-14.31	-$478,571	
Recycle W6 x 12 x 9' Foundations	16,723	EA	-14.93	-$249,689	
Recycle W6 x 20 x 11' Foundations	2,003	EA	-30.41	-$60,925	
Recycle W6 x 7 x 11' Foundations	14,249	EA	-10.65	-$151,687	
Recycle SCADA and Met Stations	25	EA	12.00	$300	
Subtotal of Recycling credits				-$5,272,445	-$632,693
Resale of Equipment	QTY	Unit		Net Recylcing / Resale	
Resale of Photovoltaic Module[1]	1,457,350	EA	76	-$110,758,600	-$13,291,032
Shipment - Spotsy to AZ	2,438	Container	4,876	$11,887,688	$1,426,523
Total Salvage Cost (Recycling and Resale)				-$104,143,357	-$12,497,203
	Contingency				
Decomissioning Gross Cost	+20%	$54,877,784.22			$6,585,334
Salvage Value (estimated resale and salvage values)	-20%	-$83,314,685.42			-$9,997,762
Gross Cost+ Admin Factor- Salvage Credit = the "Decommissioning Cost Estimate".		-$28,436,901.20			-$3,083,461

[1] Based on Salvage and Reuse Value Analysis by WERECYCLESOLAR

Salvage and Reuse Value Analysis

This Salvage and Reuse Value Analysis has been prepared for the project being developed by Sustainable Power Group ("sPower"). This value analysis is supported by our contractual obligation to purchase the detailed equipment discussed herein at the valuation stated within this document, within one year of this analysis. We feel this will provide assurances related to the potential scrap value of the modules used in current US dollars.

The solar modules considered for this study include: 1,534,053 solar modules manufactured by Jinko Solar (in US, China, and Malaysia), Model Number: JKM405M-72HL-V.

At We Recycle Solar, we certainly understand the residual value in solar installation components after what may be considered the useful life in a utility scale development. There are multiple factors that can affect the salvage and/or reuse value for solar modules at anticipated end-of-life, which can be a significant factor in the decommissioning cost estimates prepared (such as the decommissioning cost estimate being supported by this document).

To determine the overall value of the solar modules from an installation, it is compulsory to understand the factors influencing the residual value in the solar modules as well as the rates of failure over the life of the installation.

Determining Solar Module Residual Value

To best understand the value of the solar module at any point in the life of that module, one must consider many factors. In development of this valuation we are considering the following factors:

1. The overall market prices for solar modules should be considered globally. This is influenced by two sub-factors:

    a. Reduction of the mass of raw materials used in manufacturing solar modules.
    b. The overall changes to the prices of solar modules over time.

    As R&D and technological advances continue with a maturing industry, the composition of a typical PV module is expected to require fewer raw materials.

    As far as costs of solar panels changing over time, the maturity of the technology and the market will reduce prices over time. It should be noted that tariffs and other international trade concerns may put additional artificial pressure on the prices. We are not able to assess these cost considerations and feel it is more conservative in detailing the valuation (lower value) by not including these costs.

    A recent report by the National Renewables Engineering Laboratory (NREL) in 2018[1] has modeled the costs of different solar technologies and also developed predicted costs of modules in the future. This report has indicated that the minimum sustainable price (MSP) of Mono-

Crystalline PERC Solar Modules manufactured in Urban China was $0.37 / W in the first half of 2018. *This report anticipates a MSP of $0.28 / W expected in 2020. For the purposes of this study we only considered the 2020 MSP.*

2. The type and wattage of the module. These factors are typically driven by end user desires and typically only affect pricing on the reuse/repurposing market if they are less than 290 watt or are manufactured in a manner that may create hazardous waste at end of life. *Neither of these cases appear to apply for this analysis.*

3. Brand Recognition: the top tier name brands typically command higher prices. *The modules addressed in this valuation are certainly a top tier brand.*

4. Reuse Potential - Rapid global PV growth may result in an associated secondary market for panel components and materials. Even operational but underperforming panels by standards of the first owner may meet expectations of a second owner. *For the purposes of this valuation we consider the base cost for reuse in the secondary market, can range in valuation (when transferring from installation owner/operator to credible reuse and recycling firms) from 5% to 25% of current market value.* This pricing is driven by the amount of testing required to re-market the modules with the appropriate certifications in place, packaging for safe transportation, and transportation costs to the testing facility.

   However, it should be noted there are several concerns that complicate secondary markets, such as product safety, voiding of warranties, future liability, voiding of feed-in-tariff agreements, and balance-of-system costs. We did not consider the reuse of the early failures in the lifetime of a module repair and reuse opportunities. Potentially, repaired PV modules can be resold on the world market at a reduced market price.

   For the purposes of this valuation, given the above factors, we would value the reusable panels for our purchase at $76.00/module ($0.1876/W) delivered to our processing plant near Prescott Arizona.

Determining the Solar Module Failure Rates

We have conducted an intense review of available data related to solar module failure rates and found that the report "End-of-Life Management: Solar Photovoltaic Panels," completed by the International Renewable Energy Agency and International Energy Agency Photovoltaic Power Systems in 2016[2]. This report provides a compilation of data from across the globe on several subjects including a detailed analysis of failure modes and rates of failure. This data is an important benchmark for this report in predicting failure rates and residual value from solar installations using panels with no significant operational history (as with most installations).

Salvage and Reuse Value Analysis

The potential origin of failures for PV panels was analyzed to estimate the probability of PV panels becoming waste before reaching their estimated end-of-life targets. The three main panel failure phases detected are:

1. Infant failures defined as occurring up to four years after installation (average two years).
2. Midlife failures defined as occurring about five to eleven years after installation.
3. Wear-out failures defined as occurring about 12 years after installation until the assumed end-of life at 30 years.

The main infant failure causes include light-induced degradation (observed in 0.5%-5% of cases), poor planning, incompetent mounting work and bad support constructions. Many infant failures have been reported within the electrical systems such as junction boxes, string boxes, charge controllers, cabling and grounding.

Causes of midlife failures are mostly related to the degradation of the anti-reflective coating of the glass, discoloration of the ethylene vinyl acetate, delamination and cracked cell isolation. Causes of frequently observed failures within all phases in the first 12 years—after exposure to mechanical load cycles (e.g. wind and snow loads) and temperatures changes—include potential induced degradation, contact failures in the junction box, glass breakage, loose frames, cell interconnect breakages and diode defects.

In the wear-out phase, failures like those reported in the midlife phase increase exponentially in addition to the severe corrosion of cells and interconnectors. Previous studies with statistical data on PV panel failures additionally observe that 40% of PV panels inspected suffered from at least one cell with micro-cracks. This defect is more commonly reported with newer panels manufactured after 2008 due to the thinner cells used in production.

Annual PV panel waste up to 2050 is modeled by illustrating the evolution of PV panel end-of-life and new PV panel installations as a ratio. This ratio starts out low at 5% at the end of 2020. However, it increases over time to 4%-14% in 2030 and 80%-89% in 2050.

For the purposes of this valuation we use an end of life rate of 5% of the solar modules installed until the end of 2020. This would equal 76,703 panels for recycling. We charge for recycling the solar modules to recover greater than 90% of the materials at a rate of $0.65/pound.

Salvage and Reuse Value Analysis

Valuation

We value the modules described in this report as follows:

Total Modules: 1,534,053
Assumed modules available for reuse/repurposing: 1,457,350 modules
Valuation of modules for reuse/repurposing: $76.00 per module

Total Positive Valuation: $110,758,600.00

Assumed modules destined for recycling: 76,703 modules
Using the base weight for the modules (from the data sheet) of 49.60 pounds, the total mass of modules for recycling is 3,804,468.80 pounds.
The recycling at a rate of $0.65/pound.

Total Negative Valuation: $2,472,904.72

Overall Valuation: $108,285,695.28

Prepared By:

Dwight Clark, Chief Compliance Officer
We Recycle Solar, Inc.
November 14, 2019

References:
[1]Woodhouse, Michael. Brittany Smith, Ashwin Ramdas, and Robert Margolis. 2019. Crystalline Silicon Photovoltaic Module Manufacturing Costs and Sustainable Pricing: 1H 2018 Benchmark and Cost Reduction Roadmap. Golden, CO: National Renewable Energy Laboratory. https://www.nrel.gov/docs/fy19osti/72134.pdf.

[2]IRENA and IEA-PVPS(2016), "End-of-Life Management: Solar Photovoltaic Panels," International Renewable Energy Agency and International Energy Agency Photovoltaic Power Systems.

PLANNING REPORT

APPLICATION:

The application is from Cavalier Solar A, LLC, applicant, for approval of a Conditional Use Permit, CUP-3-19, to construct and operate a major utility service use consisting of a utility-scale solar energy generation facility, including related equipment, 34.5 kV electrical feeder lines, project substation, and 500 kV gen-tie (overhead) transmission line. The project is located on properties zoned Rural Agricultural Conservation (RAC) on Burwells Bay Road, Jones Drive, Mill Swamp Road, and Pons Road, including Tax Parcels 10-01-017, 10-01-020, 10-01-021, 10-01-023, 10-01-024, 10-01-025, 10-01-027, 10-01-030, 11-01-005, and 11-01-015. The application includes a request from the owners of six affected parcels to withdraw their properties from the Moonlight Agricultural/Forestal District.

ELECTION DISTRICT:

Carrsville

LOCATION:

The subject properties lie adjacent to three secondary roads that converge near the center of the project area: Mill Swamp Road (Route 621/626), Burwells Bay Road (Route 621), and Jones Drive (Route 626). They include parcels located on Mill Swamp Road to the east and south of this intersection. Tax Parcels 10-01-020, 021 and 027 (the Seward tracts) are accessible solely from the gated hunt club access road on Route 626. A grouping of solar panels is proposed on Pons Road (Route 625) adjacent to the Surry County line. Agricultural, forestal, and dispersed single-family residential uses occur throughout the project area.

The project is located less than one thousand feet and potentially within view of the following residential dwellings: 9074 Jones Drive, 9352 Burwells Bay Road, 9384 Mill Swamp Road, 9527 Mill Swamp Road, 11063 Mill Swamp Road, and 11073 Mill Swamp Road. Although topography and existing woodlands mostly block views of the site, the applicant proposes supplemental landscaping to be installed next to these residences to enhance visual buffers and screening. Other residential properties located in proximity or adjacent to the project are screened entirely from view by mature forest.

Proposed solar equipment on Tax Parcels 10-01-017, 024, and 030 (the Delk tracts) on the northern and western sides of Mill Swamp Road near its intersection with Burwells Bay Road will be buffered but remain partially visible to motorists traveling along adjoining public roads. Solar panels on Tax Parcel 11-01-015 (the Batten tract) will be buffered but remain partially visible primarily to traffic on Mill Swamp Road. Solar equipment adjacent to other road segments in the project area will be minimally visible upon installation of supplemental landscaping to enhance existing buffers or invisible due to the retention of mature forest along the road.

BACKGROUND:

The project lies within the north-central area of the County adjacent to Surry County. The predominent land use is agriculture and is sparsely populated. The area features a relatively high concentration of historic structures described in depth in the enclosed Phase 1 Architectural Resource Survey, including the Carroll Plantation, (Abraham) Jones House, and Gale (Burwell Person) House. Significant areas of wetlands can be found adjacent to Pouches Swamp and on recently logged silvicultural lands.

On February 3, 2021, the County Agricultural and Forestal District Advisory Committee considered a petition from property owners to remove portions of six parcels, including all of Tax Parcels 10-01-020, and 10-01-021, from the Moonlight Agricultural and Forestal District and subsequently voted to recommend approval of the petitioners request for withdrawal. In accordance with Appendix D of the County Code, this action constitutes advice from the Committee to the Planning Commission to consider when deciding whether to recommend withdrawal of the parcels to the Board of Supervisors. The parcels subject to this request are Tax Parcels 10-01-020, 10-01-021, 10-01-023, 10-01-027, 11-01-005, and 11-01-015.

The Planning Commission held a public hearing on the application at their February 23, 2021, regular meeting. Following the hearing, the Planning Commission voted to continue consideration of the item to their March 23, 2021, regular meeting. The Planning Commission requested additional information from staff and the applicant at the meeting. An informational memo addressing these requests is attached for your information.

DESCRIPTION:

The applicant proposes to lease and purchase land in Isle of Wight County to construct a 438-acre solar energy facility as part of a larger 240 megawatt solar facility (maximum) straddling both Surry and Isle of Wight counties. Approximately 59 megawatts will be generated in Isle of Wight County. Of that total facility area, approximately 39% is currently in agricultural use (cropland); the remaining area is in forestal/silvicultural use and being actively managed for timber production. The vast majority of the agricultural lands affected by the project are considered "prime farmland" or "prime farmland if drained" according to the USDA National Resource Conservation Service (NRCS) Soil Survey Map. Forestal areas affected by the proposed use consist of tracts containing young and mature pine but also areas of mixed hardwood and pine forest that were harvested recently.

The solar facility consists of interconnected photovoltaic (PV) modules that feed electricity generated by the panels to a collection system will route the power to transformers. Medium voltage (34.5 kV) underground and overhead transmission lines will transmit power from solar panels to a project connector substation to be constructed on Tax Parcel 11-01-015 northwest of the existing Dominion substation at 10469 Mill Swamp Road. From there, a 500kV overhead generation-tie line will transmit electricity from the project substation to the Dominion substation. Construction of overhead transmission lines will cross forested wetlands and require wetlands permits for the disturbance from the Army Corps of Engineers (ACOE). Solar panels are sited to completely avoid disturbances to wetland areas throughout the project area.

A Phase 1 cultural resource survey was undertaken in September 2019 (and updated in June 2020) and an architectural resource survey completed in October 2020 by Dutton and Associates, LLC. The overall findings of these analyses are summarized below:

- Architectural Resource Survey: The report found that, with the exception of one historic resource in the project vicinity (the Jones House at 9355 Burwells Bay Rd.), properties eligible or potentially eligible for listing on the National Register of Historic Places (NRHP) are sufficiently distant and screened from elements of the proposed use such that the solar facility is anticipated to have no more than "minimal impact" on these resources. Until recently, solar panels and equipment were proposed on Tax Parcel 10-01-025 (Barcroft) adjacent to the Jones House and between that historic homesite and two adjoining public roads, Burwells Bay Road and Jones Drive. The report concluded that, although the historic setting of this remaining resource was already partially compromised by the presence of the high voltage transmission line on the property, visibility of the facility from the historic house as well as the view of the house from public thoroughfares would be "moderately impacted" by the solar facility. See below for additional discussion about how staff evaluated and addressed this impact.

- Cultural Resource Survey: The consultant also completed Phase 1A and Phase 1 cultural resource surveys of properties within the project area. The Phase 1 analysis included the digging of test pits at locations identified in the 1A survey as having low, moderate and high potential for resources. The report concluded that all but one of the early-twentieth century sites where shovel tests were conducted are badly disturbed by logging or other destructive activities and were not recommended for inclusion in the NRHP. Two sites, including the oldest site evaluated, were identified as "potentially eligible" for inclusion and recommended for avoidance and further evaluation. Both are located in Surry County.

Staff's evaluation of this project since the second submittal in September 2020 has focused on the effects of the project on the historic viewshed of the Jones House, an example of early Tidewater architecture, from adjacent public roads. Staff's concerns were threefold: (1) the impact of modern solar equipment and chain-link security fencing in close proximity to this historic property; (2) the alteration of the historic landscape that would result; and (3) the impairment of the scenic viewshed from rural roads in this remote part of the county, particularly given that other parcels participating in the project appear capable of supporting the equipment

particularly given that other parcels participating in the project appear capable of supporting the equipment proposed on Tax Parcel 10-01-025. The applicant responded in December by modifying the concept plan to relocate all proposed solar panels to the west side of the property adjacent to Jones Drive. However, a number of panels were still situated within view of the Jones House and visible from Jones Drive, blocking the view of the house and outbuildings. This prompted staff to request that the easternmost group of solar arrays be moved to Burwells Bay Road on the northern side of the high-voltage power line. The applicant responded in the latest submittal by removing proposed equipment from this property altogether.

The findings of the various historical and environmental studies have affected the scale of the project as land originally thought to be suitable for development has since been found to be unsuitable. Staff anticipates that the project may continue to be refined and land area encumbered by solar equipment reduced as reviews by County staff and state and federal agencies continue and these studies are updated by the applicant to address future comments.

COMPREHENSIVE LAND USE PLAN:

The future land use designations for properties in the project area are Rural Agricultural Conservation (RAC) and Environmental Conservation (EC). The RAC designation is intended to "remain largely in agricultural and forest" usage. The plan states that "non-farm uses such as agricultural and forest product processing and distribution, resource extraction, and uses reliant on large areas of land such as solar farms and agritourism may also be appropriate when sited correctly." The EC designation protects sensitive environmental features and "serves to create natural connections for wildlife, protect commercial and recreational fisheries, and to provide breaks in and between developments." These areas correspond to "wetlands, floodplains, forests and some areas of farmland" which "should be protected [as] open spaces."

The comprehensive plan contains the following additional guidance pertaining to the proposed use in rural areas of the County generally:

- The chapter "Preserve the Isle" contains an overall goal of maintaining agriculture and rural character and a policy of "minimizing land use conflicts by separating agricultural lands from non-agricultural activities, and retaining a critical mass of agricultural land that promotes effective operation and the overall strength of the agricultural community."

- The chapter "Shape the Isle" contains a goal aimed at enhancing efforts to protect and preserve the significant historic and archaeological resources and cultural heritage of the County. It also contains a specific policy aimed at protecting "rural historic landscapes by ensuring development is consistent with existing community character through performance criteria for new development."

- The chapter "Serve the Isle" includes a section on community energy which notes the County's attractiveness as a "prime location" for utility-scale solar facilities and discusses various concerns expressed by the community about "the potential loss of agricultural lands, visual impacts, use of toxic materials in the panels, [and] the potential for groundwater and soils contamination." This section establishes location considerations on Page 74 for large solar facilities to "help ensure their compatibility with the community's future vision":

    - Research appropriate target density parameters for future facilities to mitigate the impacts related to the scale of these facilities;
    - Set a maximum percent usage of assembled property to mitigate impacts to habitat, soil erosion, and stormwater runoff;
    - Require facilities be located outside of DSDs;
    - Avoid or minimize impact to prime farmland or farmlands of statewide importance as defined by the USDA and Commonwealth of Virginia, respectively; and
    - Facilities should be located outside of the viewshed of any scenic, cultural, or recreational resources (i.e., solar facilities may not be seen from surrounding points that are in line-of-sign with a resource location) or within the Highway Corridor Overlay District.

For staff's findings regarding the extent to which the proposed project comports with these goals and policies of

the comprehensive plan, refer to the "Staff Conclusions" section of this report below.

ORDINANCE REVIEW:

All parcels participating in the project as listed on Sheet C1.4 of the concept plan and Exhibit D of the narrative are zoned Rural Agricultural Conservation (RAC). The application proposes to develop a utility-scale solar facility, which is classified as a major utility service and conditional use in the RAC District, on all or a portion of these parcels. The RAC zoning district is intended to preserve and protect areas of the County that are predominantly agricultural and to "protect the agricultural industry from sprawling residential development that displaces substantial areas of agricultural land for a small number of dwelling units." Conditional uses such as solar facilities may be considered compatible uses in the district provided reasonable and appropriate conditions are imposed by the Board of Supervisors to mitigate negative impacts on the surrounding community.

Section 1-1017 of the Zoning Ordinance provides the following criteria for review of a conditional use permit application that the Planning Commission and Board of Supervisors shall consider before granting the permit:

1. That the establishment, maintenance, and operation of the conditional use will not be detrimental to or endanger the public health, safety, and general welfare;
2. That the conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially impair the use of other property within the immediate proximity;
3. That adequate utilities, water, sewer or septic system, access roads, storm drainage and/or other necessary public facilities and improvements have been or will be provided;
4. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion on the public streets;
5. That the proposed conditional use is not contrary to the goals and objectives of the Isle of Wight County Comprehensive Plan;
6. That the conditional use shall, in all other respects, conform to the applicable regulations of the zoning district classification in which it is located and to the special requirements established for the specific use; and
7. That the use(s) at the location proposed will not result in a multiplicity or saturation of similar uses in the same general neighborhood of the proposed use.

In addition to the standards and other guidelines set forth in the Zoning Ordinance, the Board may impose reasonable conditions or limitations on any approval, including the posting of performance guarantees. Such conditions may include, but are not necessarily limited to:

1. The number of persons living or working in the immediate area and the proposed hours of operation, as may applicable;
2. Traffic conditions, including facilities for pedestrians, such as sidewalks and parking facilities; the access of vehicles to roads; peak periods of traffic; and proposed roads, but only if construction of such roads will commence within the reasonably foreseeable future;
3. The orderly growth of the neighborhood and community and the fiscal impact on the County;
4. The effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise upon the use of surrounding properties;
5. Facilities for police, fire protection, sewerage, water, trash and garbage collection and disposal, and the ability of the County or persons to supply such services;
6. The degree to which the development is consistent with generally accepted engineering and planning principles and practices;
7. The structures in the vicinity such as schools, houses of worship, theaters, hospitals, and similar places of public use;
8. The purposes set forth in this ordinance, the County's Comprehensive Plan, and related studies for land use, roads, parks, schools, sewers, water, population, recreation, and the like;
9. The environmental impact, the effect on sensitive natural features, and opportunities for recreation and open space; and
10. The preservation of cultural and historic resources or landmarks.

Staff recommends the conditions set forth below to satisfy the above criteria for granting the conditional use permit, including protecting the health, safety, and welfare of the public from the effects of the project and ensuring that the use remains as unobtrusive as possible to adjoining properties and the general public, both during construction and throughout the life of the facility.

AGENCY REVIEW:

The applicant has completed the following studies which have been submitted for review by federal, state, and local agencies:

- The cultural and architectural resource surveys were submitted to the DHR Review and Compliance Division for review and comment. The department issued comments and recommendations to the applicant in its letter dated December 23, 2020, which concur with those of the cultural resource assessment but deviate from the consultant's conclusion at that time that the proposed solar equipment on Tax Parcel 10-01-025 (Barcroft) would only "moderately impact" the Jones House.

- Field wetlands delineations were conducted by Resource Environmental Solutions, LLC (RES) for wetlands located throughout the project area. The applicant is awaiting confirmation by the US Army Corps of Engineers.

- The Economic Development Department indicated overall support for the project. A previous economic impact memorandum dated August 19, 2019, has been updated by Planning and Zoning staff to include the acreage of the proposed project.

- The application, including the Traffic Plan (Appendix F of the narrative), was forwarded to the Virginia Department of Transportation (VDOT) Franklin Residency upon receipt. The department issued a number of comments related to details for proposed entrances (e.g., sight distances, culvert sizes, etc.) to the site that will be resolved during site plan review.

STAFF CONCLUSIONS:

Strengths:

1. The project generally meets the goals and objectives of the comprehensive plan contingent upon the recommended conditions of approval below. These conditions are intended to ensure that the project remains consistent with comprehensive plan and satisfies the location considerations identified in the community energy section of the plan.
2. The proposed land use will result in an increase in revenues over time.
3. Impacts to environmental and historic resources are minimized by installing and retaining landscape buffers and relocating proposed equipment to properties located farther from public streets, nearby residences, and historic structures.
4. Despite the considerable area of the proposed facility, approximately 68% of the development will not be visible to adjoining landowners or from local private and public roads.

Weaknesses:

1. The proposed use will remove approximately 168 acres of prime agricultural land from active production during the life of the facility.
2. Short term impacts to nearby residential development in the area may occur during the construction phase from truck traffic, noise, and dust.

STAFF RECOMMENDATION:

Staff recommends that the Planning Commission forward to the Board of Supervisors a recommendation for approval of the withdrawal from the Moonlight Agricultural and Forestal District of parcels with tax map numbers 10-01-20, 10-01-021, portion of 10-01-023, portion of 10-01-027, portion of 11-01-005 and portion of 11-01-015

as described in the attached Agricultural and Forestal District Committee staff report, and approval of the conditional use permit for Cavalier Solar (CUP-3-19), subject to the following conditions: (1) The subject properties shall be developed in general conformance with the approved site plan prepared by Kimley Horn and Associates, Inc. dated February 2, 2021 for up to 500 total acres. (2) The portion of the subject properties supporting solar panels shall be enclosed by security fencing of a type which is harmonious with the rural, agricultural, and historical character of the County as determined by the Zoning Administrator upon approval of the site plan for the project. (3) The applicant shall preserve and maintain existing forest and vegetation within required setback areas and buffer yards and shall not clear or cut live trees within required setbacks or buffer

yards without written authorization from the Zoning Administrator. (4) A continuous screening zone at least 75 feet in width shall be established surrounding the project electrical substation. Existing live trees and vegetation shall be preserved within the screening zone , provided that breaks for required access, overhead and underground transmission lines, shall be permitted to interrupt the contiguousness of the zone with approval by the Zoning Administrator. (5) The applicant shall submit an Emergency Response Plan with the first submission of the site plan, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided, at the discretion of the County, to County emergency response staff with regards to safety for on-site emergency response. The applicant shall install a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise and include plans for the same on the project site plan. (6) The applicant shall conserve topsoil on the site to the maximum extent feasible. Topsoil stockpiled on the site shall be stored out of view from adjacent properties and public roads. (7) Hours of operation for construction activities shall be limited to 7:00 A.M. to 7:00 P.M. Monday through Friday and 9:00 A.M. to 7:00 P.M on Saturdays and Sundays.

ATTACHMENTS:

Description	Type	Upload Date
PC Follow-up Memo	Cover Memo	3/11/2021
General Location Map	Backup Material	2/16/2021
Zoning Map	Backup Material	2/16/2021
Site Photos	Backup Material	2/17/2021
Proposed Development Map	Backup Material	2/16/2021
CUP Application and Narrative	Backup Material	2/17/2021
Archaeology Report	Backup Material	2/17/2021
Architectural Report	Backup Material	2/17/2021
AFD Committee Staff Rpt Feb 2021	Backup Material	2/17/2021
Cavalier ED Impacts Feb 2021	Backup Material	2/17/2021
PC Resolution	Resolution Letter	2/17/2021

Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

DEPARTMENT OF ECONOMIC DEVELOPMENT

MEMORANDUM

TO: Isle of Wight County Planning Commission

FROM: Joshua A. Bateman, AICP, Principal Planner

DATE: March 10, 2021

RE: Cavalier Solar A, LLC Solar Facility CUP and Petition to Withdraw Affected Properties from the Agricultural and Forestal District – Follow-Up Information

At the February 23, 2021 Planning Commission meeting, members requested clarification and additional details from the applicant and County staff regarding various aspects of the applicant's requests. Staff has coordinated with the applicant, the Isle of Wight County Commissioner of the Revenue (COR), and other appropriate parties to develop detailed responses to the following inquires:

1. **What are the total areas of: (a) the parcels involved in the CUP application, (b) the lands on such parcels to be developed, purchased, and leased for the proposed use, and (c) the properties and portions thereof for which removal from the agricultural and forestal district has been requested?**

   The table below clarifies the total areas associated with various components of the applicant's CUP application and petition to withdraw affected properties from the agricultural and forestal district. The "potential max. lease area" represents the maximum area of each parcel which could potentially be leased by the applicant from each property owner for the proposed use. The maximum area includes additional contingency area in the event that the land where the facility is currently proposed on the concept plan is later found to be unsuitable due to environmental, archaeological, or other constraints. The remaining acreage of each parcel, therefore, is not being considered by the applicant for lease or purchase for the purposes of developing the proposed solar facility. The total land disturbance depicted on the concept plan for the portion of the project in Isle of Wight County is 438 acres.

PARCEL ID	LEGAL AREA (AC.)	POTENTIAL MAX. LEASE AREA (AC.)	PURCHASE AREA (AC.)	PANEL AREA (AC.)	AREA REMOVED FROM A&F DIST. (AC.)
10-01-017	150	47	0	33	Not in district
10-01-020	123.7	123	0	95	123.7
10-01-021	130.7	37	93	110	130.7
10-01-023	120.3	20	0	18	29.1
10-01-024	126.1	39	0	23	Not in district
10-01-025	120.1	0	2*	0	0
10-01-027	130	75	0	50	57.2
10-01-030	128.5	37	0	23	Not in district
11-01-005	447.6	100	3	36	137.2
11-01-015	207.5	25	0	25	26.3
TOTAL	**1,684.5**	**503**	**98**	**413**	**504.2**

* Easement to be acquired for the medium voltage line.

2. **Is the applicant owning or leasing the parcels listed above in whole or part?**

   According to Exhibit D, Table A of the Project Narrative, the applicant proposes to purchase, lease, or acquire easements for the acreages shown on portions of the parcels identified in the CUP application. Areas to be developed in solar panels, accessory equipment, and stormwater detention basins will predominately be leased from property owners. A combination of permanent easements and lease agreements will be obtained for the land needed for access roads and electrical lines. According to the applicant, the only lands to be purchased in fee simple are the project substation lot on Parcel 11-01-005 and a significant portion of the panels on Parcel 10-01-021. An easement will be purchased for the medium voltage powerline corridor on Parcel 10-01-025.

3. **What is the effect of removing only the leased and purchased (developed) area from the agricultural and forestal district as has been requested? Is this allowed?**

   Land lying within the AFD qualifies automatically for an agricultural or forestal use-value assessment pursuant to § 58.1-3229 et seq. of the Code of Virginia, “if the

requirements for such assessment contained therein are satisfied." These requirements preclude consideration of the presence of electrical utility lines when reclassifying an agricultural or forestal property, or portion thereof, to a more intensive use for tax purposes (§ 58.1-3230). Land within such a district cannot be converted into a more intensive use until the owner withdraws or removes such land from the district, at which time such land which is no longer part of a district is subject to and liable for roll-back taxes as provided in § 58.1-3237 of the Code of Virginia. This section requires the payment of rollback taxes whenever the zoning of real estate changes to a more intensive use at the request of an owner, but states that such additional or rollback taxes shall only be assessed against that portion of such real estate which no longer qualifies for assessment and taxation on the basis of use.

4. **Parcel 10-01-025 is identified as one of the parcels listed in the CUP application but is not being withdrawn from the agricultural and forestal district. Why?**

The applicant is proposing to acquire an easement for the right-of-way for the medium-voltage line transmitting electricity generated by panels west of Route 621 to the project substation on Parcel 11-01-005. This right-of-way will run adjacent and parallel to the existing high voltage line crossing Parcel 10-01-025. This parcel is the only one in the project area that will contain electrical transmission lines but not solar energy generation equipment.

The medium and high voltage lines are considered accessory to the principal use of the property (agriculture) pursuant to the definition of accessory uses in Section 2-1002 of the Zoning Ordinance. The portion of Parcel 10-01-025 located within a power line easement may remain in the agricultural and forestal district, and the land lying beneath the overhead lines on this property may continue to be used as cropland. The proposed accessory use of the property does not change the classification of the property to a more intensive use for real estate tax assessment purposes for the reason noted in staff's response to Question 3 above. In general, according to the COR, the acreage lying within a utility easement is assessed initially by the firm that does the County-wide reassessment at a flat rate of $300 per acre before being placed in a "non-qualifying" category by the COR and reassessed at $100 per acre.

5. **When are rollback taxes due? When is the leased or developed area of these parcels reassessed by the COR for real estate tax purposes?**

   According to the COR and pursuant to § 58.1-3237 of the Code of Virginia, rollback taxes are owed and payable at the time building permits are requested and issued for construction of the solar farm. Reassessment of land to be occupied by the proposed solar facility occurs once the use has been established, that is, following completion of construction and final inspection.

6. **Is a decommissioning agreement and bond required for the proposed use? What details must be included in the agreement? How are the estimate of decommissioning costs and the residual value of solar equipment determined?**

   Section 5-5003.M. of the Zoning Ordinance states that, prior to final site plan approval, an owner, lessee, or developer of real property shall enter into a written agreement to decommission solar energy equipment, facilities, or devices and provide the agreement to the zoning administrator for review and approval. The ordinance requires that the agreement contain specific terms and conditions, including (1) a right-of-entry for the locality in the event an applicant defaults on his obligations under the agreement; (2) financial assurance in the form of a bond or letter of credit in an amount not to exceed the projected cost of decommissioning; and (3) provisions for the physical removal by the applicant of all above-ground and below-grade structures, equipment, and roads; decompaction of soils; and restoration of pre-development topography on the site.

   This local provision and the state enabling law both require that the decommissioning cost estimate be prepared by licensed professional engineer with experience in preparing such estimates. The estimate may include the net salvage value of such equipment, facilities, or devices, plus a reasonable allowance for estimated administrative costs related to a default of the owner, lessee, or developer, and an annual inflation factor. Labor, equipment, and mobilization costs are included in the estimate.

7. **What happens to the solar panels and equipment upon decommissioning? Can the solar panels be recycled?**

   Modern solar panels have a useful life of approximately 25-30 years after which energy production declines by what manufacturers consider to be a significant amount. A 2012 study by the National Renewable Energy Laboratory (NREL)

found that, on average, solar panel output falls by 0.8 percent each year, referred to as the solar panel degradation rate.[1] Panels that are substandard but still operational can potentially be sold on secondary markets. Those that are broken or no longer functional can be recycled, but in the U.S. at least, the recycling options for solar have, to date, been limited. Common crystalline-silicon modules have been traditionally handled by mainstream glass, metal, or electronic waste recycling facilities. The recycling capacity of the U.S. solar industry is rapidly evolving, however. The U.S. Solar Energy Industries Association created a program that aims to cut the cost of recycling panels, inverters, and other solar equipment by aggregating waste collection and channeling old or damaged products to a select group of recyclers to achieve economies of scale. Several companies in the U.S. have recently been established to recycle solar equipment, and several states have passed laws to incentivize or regulate photovoltaic panel recycling.[2]

8. **Is the applicant required to repair any damage to public roads caused by construction equipment and activities?**

Section 5-5003.M. of the Zoning Ordinance states that, during and at the end of project construction, any damage done to public roads by solar farm construction equipment shall be repaired in accordance with VDOT standards and specifications. Post-construction damage shall be identified based on inspections by VDOT with the developer or their agent prior to and upon completion of construction to identify the items needed for repair. The County's zoning requirement tracks closely to VDOT's, which requires an applicant to obtain permits for all private entrances to state-maintained rights-of-way and bond for the costs of construction. VDOT will require applicants to repair any safety issues immediately and will not release the performance bond until an inspection has been performed and a punch list of deficiencies and related repairs has been completed to department standards as confirmed by an on-site inspection. Applicants are required also to provide movement of traffic (MOT) details and traffic control plans on the project site plan, which is subject to VDOT review and comment.

[1] Richardson, Luke. "How long do solar panels last? Solar panel lifespan explained." *Energysage*. Pars. 2-4. news.energysage.com/how-long-do-solar-panels-last/#:~:text=As%20a%20general%20rule%20of, to%20be%20a%20significant%20amount. 3 March 2021.
[2] Deign, Jason. "Landfilling Old Solar Panels Likely Safe for Humans, New Research Suggests." *Green tech media*. Solar's recycling options. www.greentechmedia.com/articles/read/solar-panel-landfill-deemed-safe-as-recycling-options-grow. 3 March 2021.

Cavalier Solar Conditional Use Permit (CUP-03-19)

EXHIBIT A: Planning Commission Recommendation

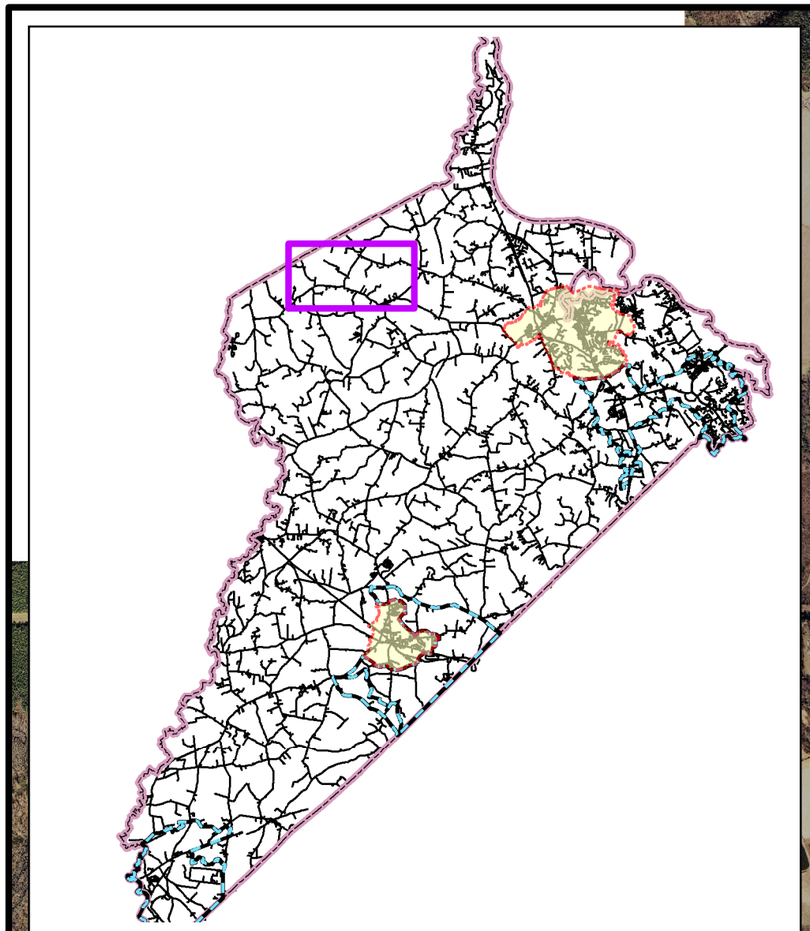
EXHIBIT C: Conditions

The Planning Commission forwards to the Board of Supervisors a recommendation for approval of the conditional use permit for Cavalier Solar (CUP-3-19) subject to the following conditions:

1) The subject properties shall be developed in general conformance with the approved site plan prepared by Kimley-Horn and Associates, Inc. dated February 2, 2021 for up to five hundred (500) total acres.
2) The portion of the subject properties supporting solar panels shall be enclosed by security fencing of a type which is harmonious with the rural, agricultural, and historical character of the County as determined by the Zoning Administrator upon approval of the site plan for the project.
3) The applicant shall preserve and maintain existing forest and vegetation within required setback areas and buffer yards and shall not clear or cut live trees within required setbacks or buffer yards without written authorization from the Zoning Administrator.
4) A continuous screening zone at least seventy-five (75) feet in width shall be established surrounding the project electrical substation. Existing live trees and vegetation shall be preserved within the screening zone, provided that breaks for required access, and for overhead and underground transmission lines, shall be permitted to interrupt the contiguousness of the zone with approval by the Zoning Administrator.
5) The applicant shall submit an Emergency Response Plan with the first submission of the site plan, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided, at the discretion of the County, to County emergency response staff with regards to safety for on-site emergency response. The applicant shall install a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise and include plans for the same on the project site plan.
6) The applicant shall conserve topsoil on the site to the maximum extent feasible. Topsoil stockpiled on the site shall be stored out of view from adjacent properties and public roads.
7) Hours of operation for construction activities shall be limited to 7:00 A.M. to 7:00 P.M. Monday through Friday and 9:00 A.M. to 7:00 P.M on Saturdays. No construction shall occur on Sundays.

Cavalier Solar Conditional Use Permit - Property Map (Exhibit B)

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA



N

Isle of Wight - Surry Co. Boundary

CAVALIER SOLAR Parcels

JONES DRIVE

10-01-027

BURWELLS BAY ROAD

10-01-021

10-01-023

DRIVEWAY

10-01-025

10-01-025

11-01-005

10-01-020

DRIVEWAY

10-01-024

10-01-030

11-01-015

60-1-1

MILL SWAMP ROAD

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

PONS ROAD

10-01-017

JAMES WILSON WAY

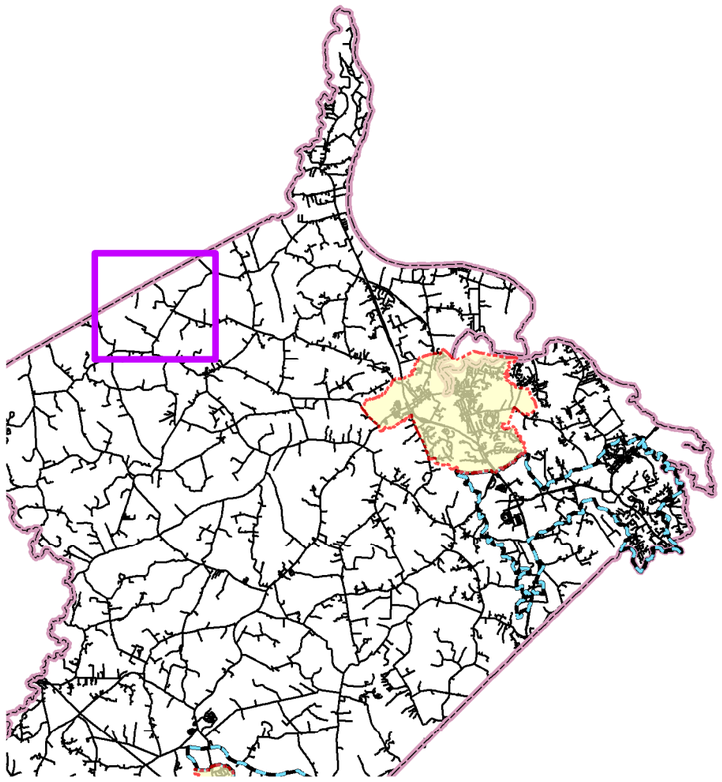
Legend

- Road Center Lines
- Towns
- Development Service Districts
- Parcels
- Rivers & Lakes
- County Boundary

0 1,000 2,000 Feet

Cavalier Solar Conditional Use Permit - Zoning Map

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA



N

Isle of Wight - Surry Co. Boundary

JONES DRIVE
DRIVEWAY
BURWELLS BAY ROAD
DRIVEWAY
RAC
DRIVEWAY
DRIVEWAY
DRIVEWAY
DRIVEWAY
ULLET DRIVE
PONS ROAD
JAMES WILSON WAY
DRIVEWAY
DRIVEWAY
RR
MILL SWAMP ROAD
STALLINGS CREEK DRIVE
DRIVEWAY

Legend

- Cavalier Solar Parcels
- General Commercial
- General Industrial
- General Industrial Conservation
- Limited Commercial
- Limited Industrial
- Neighborhood Conservation
- Planned Dev. - Mobile Home
- Planned Dev. - Mixed Use
- Planned Dev. Residential
- Rural Agricultural Conservation
- Rural Residential
- Suburban Estate
- Suburban Residential
- Urban Residential
- Village Center
- Road Center Lines
- Towns
- Development Service Districts
- County Boundary
- Parcels

0 1,000 2,000 Feet

Cavalier Solar Conditional Use Permit - Proposed Development Map

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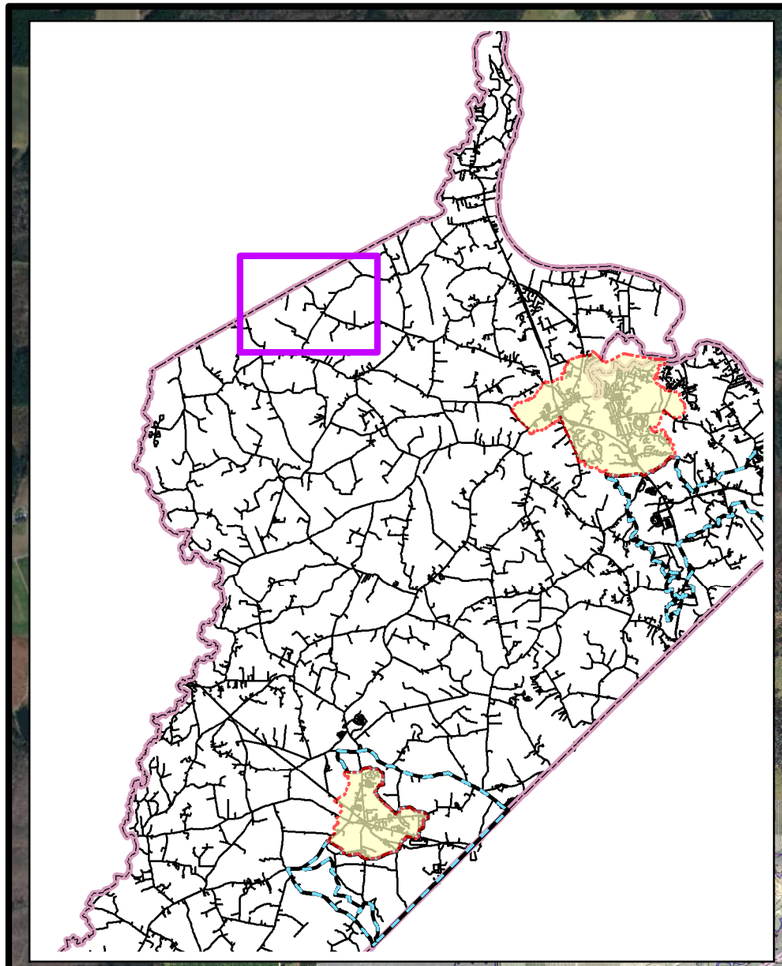
ISLE OF WIGHT
COUNTY, VIRGINIA



N

Legend

- Affected Residences
- Cavalier Project Fenceline
- Road Center Lines
- Towns
- Development Service Districts
- Parcels
- Rivers & Lakes
- County Boundary

0 1,000 2,000 Feet

9074 JONES DRIVE

34.5 kV line

ABRAHAM JONES HOUSE

Project substation

500 kV gen-tie line

9352 BURWELLS BAY ROAD

9527 MILL SWAMP ROAD

9384 MILL SWAMP ROAD

11063 MILL SWAMP ROAD

11073 MILL SWAMP ROAD

Dominion substation (existing)

Virginia Geographic Information Network (VGIN)

Parcel 10-01-024 looking southwest from Mill Swamp Road (Route 621) just south of the Burwells Bay Road intersection.

Parcel 10-01-030 looking northeast from Mill Swamp Road (Route 626) just east of the Burwells Bay Road intersection.

Parcel 10-01-030 looking northwest from Mill Swamp Road (Route 626) just east of the Burwells Bay Road intersection.

Parcel 11-01-015 looking east from Mill Swamp Road (Route 626) west of the Dominion electrical substation.

Parcel 11-01-015 looking west from Mill Swamp Road (Route 626) in front of 11073 Mill Swamp Road.

The Abraham Jones House (9355 Burwells Bay Road) as seen from the driveway directly in front of the property on Burwells Bay Road.

Parcel 10-01-027 looking east-northeast from Jones Drive.

Parcel 10-01-027 looking east-southeast from Jones Drive.

The gated hunt club access road to Parcels 10-01-020, 10-01-021, and 10-01-023 (Seward tracts) from Beechland Road.

Parcel 10-01-021 looking south as viewed from the private access road just south of the first junction.

Parcel 10-01-021 looking south as viewed from the private access road.

Looking west toward Parcel 10-01-020 from the turnaround at the end of the private access road on Parcel 10-01-021.

The existing Dominion electrical substation as viewed from Mill Swamp Road (Route 626).

The existing Dominion electrical substation on Mill Swamp Road (Route 626).

S·POWER
An AES and AIMCo Company

Cavalier Solar A, LLC

Conditional Use Permit Application

Isle of Wight County

Updated: February 16, 2021

4200 Innslake Dr, Suite 302, Glen Allen, VA 23060| **P** 804.533.6100| www.sPower.com

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Exhibits

Exhibit A, Conceptual Plan

Exhibit B, Isle of Wight Conceptual Plan

Exhibit C, Isle of Wight Zoning Map

Exhibit D, Parcel List (Table A) and Legal Descriptions

Exhibit E, Participating Parcels with Consent Affidavits and Adjacent Parcels

Exhibit F, Traffic Plan

Exhibit G, Property Deeds

Exhibit H, Proof of Interconnection Application

Exhibit I, County Tax Records of Participating Properties

Exhibit J, Cavalier Solar Proposed Conditional Use Permit (CUP) Conditions

Exhibit K, Economic Impact Assessment

INTRODUCTION

This Conditional Use Permit (CUP) Application was prepared for Cavalier Solar A, LLC's (Cavalier Solar or the Applicant) proposed solar project (the Project) located in southern Surry County and northern Isle of Wight County (the County), Virginia (refer to Exhibit A). The following Project description provides general information that is required pursuant to Isle of Wight County's Conditional Use Permit (CUP) application and the Isle of Wight County Zoning Ordinance.

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1. The Project

The Project consists of a maximum 240 megawatt (MW) solar energy facility to be located in southern Surry County and northern Isle of Wight County (Exhibit A, B and C). The portion of the Project proposed within Isle of Wight County consists of approximately 59 megawatts to be developed within twelve (12) parcels (Project Area), owned by eight (8) landowners. This CUP application form and the Isle of Wight County Zoning Ordinance's applies to the estimated 1,774 acres of land falling within Isle of Wight County which Cavalier Solar would purchase or lease (participating parcels), as legally described in Table A of Exhibit D. The Project facilities would cover approximately 450 acres of land (Project Site) within the Project Area. The remaining Project Area land would remain undeveloped due to numerous constraints, such as but not limited to, wetlands, existing utility rights-of-way, landowner property retention, and required county ordinance setbacks.

The Project would benefit Isle of Wight and the Commonwealth of Virginia by:

- Stimulating the local economy during construction and operation of the Project
- Increasing and diversifying Isle of Wight County's tax revenue resources
- Meeting the increasing demand for electricity generated from clean, renewable technology
- Diversifying the Commonwealth's energy portfolio; Reducing greenhouse gas emissions
- Creating "green" jobs within the Commonwealth

Cavalier Solar will utilize best management practices and coordinate with all relevant agencies to minimize and mitigate impacts to the environment and local community. The area of the Project within Isle of Wight County will comply with the County's zoning ordinance. In addition to this CUP Application Form, Cavalier Solar will obtain all necessary county, Commonwealth of Virginia and Federal permits applicable to the Project. Table 1.1 outlines the permits that are anticipated to apply to the Cavalier Solar project.

Table 1.1 - Permits and Approvals for Project Development:

Authority	Permit or Approval
Isle of Wight County	Conditional Use Permit
Isle of Wight County	Building Permit
Isle of Wight County issues approval through the authority of Virginia Department of Environmental Quality (DEQ)	Soil and Erosion Sediment Control Plan
Virginia DEQ	Pollution Discharge Elimination System
Virginia Department of Transportation (VDOT)	Land Use Permit
Virginia State Corporation Commission (SCC)	Certificate for Public Convenience and Necessity (CPCN)

The Applicant anticipates working with the Isle of Wight County Planning Commission staff to fulfill the applicable Isle of Wight County Zoning Ordinance requirements, which include: removing the property within the Project Site boundary from the Agricultural Conservation District; ensuring the project is designed with appropriate landscaping buffers and setbacks; committing to the safe and efficient use of

the roads during the construction of the Project; and providing a decommissioning plan backed by a financial guarantee. These requirements are discussed in greater detail in Sections 2, 3 and 4 below. The Applicant looks forward to working with the Isle of Wight County Planning Commission staff to further refine the site plans during a preliminary site plan application process.

1.1 Conditional Use Permit Application

Pursuant to the Isle of Wight County Zoning Ordinance, Cavalier Solar is submitting this Conditional Use Permit Application for the Project. The Conditional Use Permit Application includes the following:

- Application Form
- Application Fee
- Exhibit A, Conceptual Site Plan
- Exhibit B, Isle of Wight Conceptual Plan
- Exhibit C, Isle of Wight Zoning Map
- Exhibit D, Parcel List (Table A) and Legal Descriptions
- Exhibit E, Participating Parcels with Consent Affidavits and Adjacent Parcels
- Exhibit F, Traffic Plan
- Exhibit G, Property Deeds
- Exhibit H, Proof of Interconnection Application
- Exhibit I, County Tax Records of Properties
- Exhibit J, Cavalier Solar Proposed Conditional Use Permit (CUP) Conditions
- Exhibit K, Economic Impact Assessment

The Conceptual Site Plan (Exhibits A-C) is required as part of a conditional use application in accordance with Section 1-1017 (Conditional Uses) and Section 1-1018 (Special Uses Permits for Uses Not Provided For). Landowners for each participating parcel, as described in Exhibit D, within the Project Site have provided a Consent Affidavit for Cavalier Solar (Exhibit E). The Applicant has also provided a list of the participating parcels within the Project Site (Table A Exhibit E) and Adjacent Property Owners (Table B Exhibit E), as required by the Isle of Wight County Zoning Ordinance. At the request of the Planning & Zoning Administrator, Cavalier Solar has developed a Traffic Plan (Exhibit F), which will be developed further into a Final Transportation Mitigation Plan upon completion of the Final Site Plan. In addition to the Traffic Plan, Section 3 of this document outlines additional transportation mitigation measures for Cavalier Solar to ensure the safety and maintenance of the Isle of Wight County roads used by the Project. Additionally, the Applicant has fulfilled the requirements of Section 1-1017 and 4-2003 of the Isle of Wight Zoning Ordinance by providing a copy of the property deeds for participating parcels (Exhibit G), the proof of an interconnection application for Cavalier Solar (Exhibit H) and a copy of the county tax records for the participating parcels (Exhibit I).

A list of proposed CUP conditions for the Cavalier Solar Project are included in Exhibit J and further detailed throughout this document.

The Applicant also provided an Economic Impact Assessment prepared by a third party, Mangum Economics, to provide Isle of Wight the potential revenue benefits to the local community (Exhibit K). The Community Impact Assessment is discussed further in Section 2.3.2 of this document.

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2. Project Description

It is the intent of the Applicant, operating as sPower, LLC (a subsidiary of AES and AiMCO) to develop, construct, own and operate the Project in its entirety for the life of the Project. sPower is a full-suite utility-scale energy developer and a leading independent power producer that owns and operates more than 150 renewable generation facilities across the U.S. The energy produced by the Project will have a point of interconnect with the PJM utility grid at the Dominion owned Septa Substation located in Isle of Wight County.

The Project would consist of a maximum 240 MW solar energy facility with approximately 59 megawatts located within Isle of Wight County, as depicted on the Conceptual Site Plan (Exhibit A). PV modules will be mounted on racking systems supported by a pile-driven foundation design. The racking structure is expected to be a single-axis tracking configuration with north-south trending rows that will track the sun from east to west over the course of the day.

PV modules will be electrically connected into strings that will be connected to combiner boxes located throughout the solar energy facility. The output power cables from the combiner boxes will be consolidated and feed the direct current (DC) electricity to inverters which convert the DC to alternating current (AC).

Each inverter will be fully enclosed, pad mounted, and stand approximately seven feet in height. The AC output from the inverters will be routed through an AC collection system and consolidated within the system switchgear. The final output from the solar energy facility will be processed through a step-up transformer to match the interconnection voltage.

The Project will be designed with a comprehensive Supervisory Control and Data Acquisition (SCADA) system for remote monitoring of facility operations and remote control of critical components. Within the Project site, the fiber optic or other cabling required for the monitoring system will be installed throughout the solar energy facility leading to centrally located (or series of appropriately located) SCADA system cabinets. The telecommunication connections to the SCADA system cabinets may be wireless or hard wired.

The Project will include a meteorological (met) data collection system. The met station will have the following weather sensors: a pyranometer for measuring solar irradiance, a thermometer to measure air temperature, a barometric pressure sensor to measure atmospheric pressure, and two wind sensors to measure speed and direction. These sensors will be connected to a data logger to compile the data for transmission to a data collection center.

The Project will require adequate communication facilities in order monitor facility performance. The Applicant will work with local broadband providers to determine if adequate facilities exist nearby and work with the provider to bring the facilities to the collector substation. The need to expand the communications facilities to the collector substation may result in an expansion of broadband connection points for nearby by residents.

All energy will be routed to a project substation to be built on an adjoining parcel to the existing Septa substation owned and operated by Dominion Energy. The Project is in the interconnection study phase and has received preliminary interconnection studies from PJM and Dominion Energy for a maximum

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240MW queue position. Medium voltage (34.5kV) overhead and underground collection lines will transmit the power from the solar panels to the project substation in Isle of Wight County. The power will be stepped up from 34.5kV to 500kV and transmitted to the Septa substation.

An operations and maintenance (O&M) storage facility may be located on-site to store maintenance equipment and vehicles, safety equipment, replacement components, and other items deemed necessary for Project operations. The location of the O&M storage facility would be determined prior to Project construction.

To summarize, the Project would consist of the following primary components:

- PV modules
- Single-axis tracker system
- Electrical inverters and transformers
- Electrical AC collection system, including switchgears
- Combiner boxes
- Electrical disconnects
- Data monitoring systems
- Transmission lines
- Meteorological station
- Telecommunications equipment
- O&M storage facility
- Access roads
- Security fencing, lighting, and cameras

2.1 Project Location

The approximately 450 acres of the Project Site that are located in Isle of Wight County and are the subject of this Application include primarily rural agricultural land, cleared forest land and timber land in the County. The Project Site is surrounded by a mix of agricultural lands, forested lands, and a limited number of single-family residences. The Project Site within Isle of Wight County includes approximately 450 acres within the property boundary of twelve (12) parcels (See Exhibit A) which are either under option to lease or purchase by Cavalier Solar. In accordance with Part C of the Application for Conditional/Special Use Permit Application, Cavalier Solar has provided a Consent Affidavit from all landowners within the Project Site boundary to obtain permits on behalf of the landowner (Exhibit E). Currently all of the parcels within the Project Site boundary are zoned Rural Agricultural Conservation District (RAC), and a request to the Agricultural and Forrestal District Advisory Committee to remove the properties from the Moonlight Agricultural/Forrestal District will be submitted by the Isle of Wight Zoning Administrator on behalf of the Applicant.

The Project Site is ideal for a solar energy facility due to its topography, proximity to the Septa substation, low-population density, and obscured views from homes. The general location of the Project Site is also ideal in that it is within a rural agricultural area that is adjacent to a transmission line leading to the Septa substation.

As described in further detail in Section 4.0 of this document, the Project would produce electricity passively during the life of Project operations and not disrupt day-to-day living of nearby residences. The

Project would not increase traffic in the region during operations as the Project would be supported by approximately nine (9) full-time employees. Section 2.3.3 describes in detail the minimum setback and vegetation screening applicable to the Project in accordance with the approved CUP Conditions (Exhibit J) and the Isle of Wight Zoning Ordinance Section 5-5003. Wetland habitats and streams within the Project Site would be preserved as open space to the maximum extent practicable with naturally growing vegetation to provide wildlife habitat corridors to the natural community. A collection line from the panels to the project substation located adjacent to the Dominion substation will have minimal impacts to the forested wetlands within the Project area. The Applicant will obtain a Nationwide Permit 12 and/or 51 in accordance with the USACE regulations for the appropriate permit for the impacts to the wetlands.

2.2 Site Access

Primary access to the Project Site will be provided via Route 617 and Route 626. Site access will be improved and maintained to the satisfaction of the Isle of Wight County Fire Department. Additionally, all Project Site access locations and driveway entrances will be coordinated with Isle of Wight County and VDOT.

The Conceptual Site Plan included as Exhibits A, B and C depicts the preliminary Project Site location, potential ingress/egress site and public road use.

A security fence of at least six feet in height will be installed around the entire perimeter of the PV panel installation area to restrict access to the Project. Cavalier Solar proposes a chain link fence at least six feet in height. The proposed fence would provide the necessary security, comply with Isle of Wight County Zoning Ordinance, and blend in with the rural character of the area.

2.3 Planning and Zoning

2.3.1 Zoning District and Ordinance

All parcels within and immediately adjacent to the Project boundary are zoned Rural Agricultural Conservation (RAC) District. Per the Isle of Wight County Zoning Ordinance Section 4-2003, solar energy facilities are permitted as a conditional use in RAC zoning districts under a civic use (utility major).

2.3.2 Economic Impact Assessment

An assessment of the impact on the immediate vicinity of the Project and the Isle of Wight County community was prepared by Mangum Economics and a copy of the report is available as Exhibit K. According to the Economic Impact Assessment, the Cavalier Solar project will generate a one-time pulse of up to 787 full-time-e uivalent jobs and nine (9) full-time permanent jobs. Additionally, the most recent project layout indicates that the project will generate approximately $2.3 million in cumulative county personal property tax revenue over the facility 35-year operational life. For real property tax with a reassessment for solar use at $15,000 per acre totals approximately $4 million in cumulative revenue, for a combined personal and real property tax revenues of $6.3 million. Comparing to approximately $80,568 in cumulative county revenue under the current agricultural use, that a difference of over $6 million. These numbers could increase or decrease based on final project layout.

2.3.3 Setback and Vegetation Screening

In order to minimize the visual impacts of the Project, the Applicant will implement applicable setbacks with a natural vegetation screening and/or installed landscape vegetation to adjacent non-participating properties zoned RAC (or other non-residential zoning) in accordance with the Isle of Wight County

Zoning Ordinances (Isle of Wight Zoning Ordinance Article V Section 5-5003.M.1.4). A security fence will be installed around the entirety of the solar arrays. The security fence will be a minimum of 6 feet in height, in accordance with Isle of Wight County Zoning Ordinances.

The Project will maintain a setback with vegetation screening from non-participating parcels, residences and public roads, where applicable. Existing natural vegetation will be maintained as a vegetation screen in order to provide a natural visual screen from outside the Project's boundary to the maximum extent practicable. Areas within the setbacks and/or landscape buffers that are wetlands (as designated by the USACE) will be considered natural screening and will not be disturbed for landscape installation.

As part of the Project's infrastructure, a single substation will be installed within a property adjacent to the existing Septa Substation on Route 626. Visual screening of the substation will be achieved with the natural vegetation that currently exists within the proposed location to the maximum extent practicable.

No existing Isle of Wight ordinance requires a minimum setback to the limits of the disturbance from streams or wetlands within the Project area, however, the Project will maintain a minimum setback of 100 feet from lower quality vernal pools. The Applicant will also design a wildlife corridor between high quality vernal pools and adjacent wetland complexes to the maximum extent practicable and/or a 300-foot buffer.

2.3.4 Visual Impact

Section 2.3.3 includes the proposed mitigation for minimizing the visual impacts of the Project from public roads and adjacent residential properties. In addition, the Project avoided visual impacts to schools, churches, scenic landscapes, scenic rivers, rural districts, scenic vistas, properties with documented historical significance and scenic corridors as identified by a Phase I and Phase IA Cultural Resource Study within the Project Site area.

2.3.5 Master Plan

Isle of Wight County adopted its Economic Development Strategic Plan in 2013 to define future economic opportunities and chart a path to enhance the tax base, provide jobs and small business opportunities, and bring the community together to work toward a shared vision. One of the goals identified in the plan was the pursuit of local economic diversity to expand the tax base and provide additional employment opportunities, with a focus on clean industries (p.23). Utility-scale solar power offers a viable economic option due to the County's availability of low cost, remote land and access to the power grid (Septa Substation). The Project would be consistent with the Plan's initiatives in that it's a utility-scale solar project that would enhance the County's tax base, provide local jobs, create a direct economic stimulation to local businesses, generates clean energy, and utilizes existing energy infrastructure at the Septa Substation.

Project impacts associated with the conversion of agricultural land use to civic use for a utility/major project would be minimal.

2.3.6 Environmental Permitting

In addition to the requirements above, Cavalier Solar contracted with Kimley-Horn and Associates, Inc. to conduct species and habitat surveys, and wetlands surveys. Cavalier Solar engaged Dutton & Associates to conduct a cultural and historic resources survey at the Project Site. Surveys are being coordinated with

DEQ, Marine Resources Commission (VMRC), Department of Historic Resources (DHR), and the United States Army Corps of Engineers. These surveys were completed in the Spring of 2020, and the Applicant anticipates receiving applicable agency concurrence in the Summer/Fall of 2020. Prior to construction of the Project, all required permits, reports, and technical analyses will receive final approval from the appropriate jurisdictional agencies. Table 2.3 outlines the current status of the applicable county, commonwealth and federal regulations as well as the necessary permits required for Project development.

Table 2.3 - Permits and Regulations for Project Development:

Agency or Authority	Permit or Approval	Status
Surry County	Comprehensive Plan Amendment	Submitted - In process
Surry County	CUP Application	Submitted - In Process
Surry County	2232 Review	Submitted - In Process
Surry County	Building Permit	Pending CUP Application Approval
Surry County	Rezoning Application	Submitted - In Process
USACE	Nationwide Permit 12 and/or 51	Currently N/A – pending Final Site Plan
Isle of Wight County issues approval through the authority of Virginia Department of Environmental Quality (DEQ)	Soil and Erosion Sediment Control Plan	Pending CUP Application Approval
Virginia DEQ	Pollution Discharge Elimination System	Pending CUP Application Approval
Isle of Wight	CUP Application	Submitted
Isle of Wight	Building Permit	Pending CUP Application Approval
Virginia SCC	CPCN	Pre-application discussion with SCC Staff

2.3.6.1 Cultural and Historic Resource Surveys

In 2019 and 2020, Dutton & Associates, LLC (Dutton) conducted a Phase IA cultural resource assessment of the Cavalier Solar project area in Isle of Wight and Surry Counties, Virginia. The results of the Phase IA were submitted to the Virginia Department of Historic Resources (DHR) in October 2020 and a response letter (Exhibit L –DHR Phase 1 Response Letter Dec 23, 2020) was received December 23, 2020 with concurrence and recommendations. The Applicant is currently assessing the DHR recommendations and developing plans for Phase II testing or avoidance measures to minimize or eliminate potential impacts. Additionally, further Phase I studies are in process on the parcels that were not included in the original study area and once completed will be submitted to DHR and Isle of Wight for review.

2.3.6.2 Wetland and Species Resources

In summer and fall of 2019, Kimley-Horn and Associates, Inc. (Kimley-Horn) conducted species and habitat surveys and wetlands surveys throughout the Project Site. No listed species are anticipated to be impacted by Project activities and no further surveys or permits were required from the U.S. Fish and Wildlife Service regarding listed species. Kimley-Horn delineated wetlands within the Cavalier Project Site. Extensive wetlands and vernal pools were marked with flagging in the field and mapped for use by Cavalier Solar (Exhibit A) in accordance with USACE standards. At the time of the CUP Application submission, the extent of any wetland impacts had not been finalized within the Site Plan. Limited impacts to wetlands and/or streams are currently anticipated from the collection and/or MV lines that will connect the panels to the Project substation and will require a Nationwide Permit 12 and/or 51. sPower will inform and obtain the necessary permit(s) from the Army Corps of Engineers and/or VDEQ for any applicable impacts to jurisdictional wetlands. None of the wetland impacts will be within tidal waters or the Chesapeake Bay Preservation Area.

3. Construction

Project construction would consist of three major phases: (1) site preparation; (2) PV system installation; and (3) testing. Cavalier Solar anticipates close collaboration with Isle of Wight County during the permitting process to identify and manage environmental conditions and design criteria specific to the Project. Throughout the permitting process, Cavalier Solar will implement all required mitigation measures and Best Management Practices (BMPs) as determined by Surry County and regulatory agencies.

Construction could be initiated as early as June 2021, with a duration of approximately 12 to 18 months. Prior to the start of construction, the Applicant will submit specifications for the electric solar facility components to the Isle of Wight County Building Official for review.

3.1 Site Preparation and PV System Installation

PV module system installation will include earthwork, grading, and erosion control, as well as erection of the PV modules, supports, and associated electrical equipment. System installation will begin with teams installing the mounting and steel pier support structures. The exact design will be finalized pending determination of soil conditions but will likely include pneumatically driven H-pile steel beams attached to a tracker racking system. Post driving will be followed by panel installation and electrical work.

Concrete pads will be poured for the inverters and transformers. Concrete will be produced at an off-site location by a local provider and transported to the Project Site by truck. Final concrete specifications will be determined during detailed design engineering and will meet applicable building codes.

The PV modules require a moderately flat surface for installation. Some earthwork, including grading, fill, compaction, and erosion control cultivation may be required to accommodate the placement of PV arrays, foundations or footings, access roads, and drainage features. A Virginia Pollutant Discharge Elimination System (VPDES) permit will be obtained by Cavalier Solar. The Final Site Plan will include any catch basins and pipes and connections to existing drainage system. Provision for the adequate control of erosion and sedimentation, indicating the proposed temporary and permanent control practices and measures which will be implemented during all phases of clearing, grading, and construction.

Construction of the PV arrays will include installation of support beams, module rail assemblies, PV modules, inverters, transformers, and buried electrical cables.

Wastes that will be generated during construction may include the following: cardboard, wood pallets, copper wire, scrap steel, common trash, and wood wire spools. Cavalier Solar does not expect to generate hazardous waste during construction of the proposed Project. However, field equipment used during construction will contain various materials such as hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints, and other petroleum-based products contained in construction vehicles.

3.2 Construction Workforce

Construction could be initiated as early as June 2021, with a duration of approximately 12 to 18 months. The on-site workforce will consist of laborers, various skilled trades, supervisory personnel, support personnel, and construction management personnel. Construction will generally occur during daylight hours, Monday through Friday, with the potential for limited weekend hours. Construction activities will be conducted consistent with Isle of Wight County regulations regarding hours of construction.

The Project will generate an estimated 787 new jobs during the construction phase and will directly employ approximately nine (9) full-time positions for O&M activities. Cavalier Solar and its Engineering, Procurement, and Construction (EPC) contractor intend to host local career fairs to recruit a local workforce for the Project to the maximum extent possible.

3.3 Emergency and Shutdown Procedures

To ensure the safety of all employees working on the Project during construction, Cavalier Solar will develop and implement an Emergency Response Plan for the Project in accordance with Code of Federal Regulation 1910.38 established by the Occupational Safety and Health Administration (OSHA). Key personnel will be designated to train all employees working on the Project and will be responsible for administering emergency and shutdown procedures in the event of an emergency. The Applicant shall submit an Emergency Response Plan with the first submission of the Building site plan. The plan shall include fire suppression methods that can be immediately deployed during both construction and operation of the Project. The plan shall also include a program of education and training to be provided for County emergency response staff with regards to safety for on-site emergency response. The Applicant will include with the Final Plans the installation of a Knox Box (or similar facility access system) at the facility to ensure emergency responders have access to the facility should the need arise.

Emergency and shutdown procedures will be clearly displayed in all construction trailers, along with contact information for emergency service providers and treatment facilities. Appropriate warning signage will be placed on all meteorological equipment, electrical equipment, and Project Site ingress and egress points. Prior to construction, Cavalier Solar will notify all emergency service providers of construction activities occurring at the Project Site and inform them of all emergency and shutdown procedures, including who needs to be contacted in case of an emergency.

sPower is willing to provide the appropriate emergency response training to Isle of Wight personnel upon request and up-to-date manuals for emergency procedures within the Project Site. A refresher emergency response training course based upon a reasonable timeline at the request of Isle of Wight emergency response personnel can be provided by sPower.

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3.4 Transportation

Equipment, permanent materials, and commodities for the Project will be transported to the Project Site via state and/or interstate highways. Heavy haul trucks with multiple axles will be employed to distribute loads, as required. All equipment and material deliveries will utilize the Project Site access.

Truck deliveries of equipment and materials will occur beginning with the initial construction notice to proceed and continuing through the duration of the Project construction process. Initial truck deliveries will include heavy haul trucks for importing construction equipment, panels, project materials, followed by concrete trucks for installation of the inverter foundations, and deliveries of reinforcing steel. Electrical cabling and piping materials for buried piping will be delivered to the Project Site early in the construction period corresponding to approximately the time frame for foundation installation. Deliveries of large major equipment will commence at about midpoint of the construction period.

In order to ensure safety and manage construction traffic on public roads, Cavalier Solar contracted GAI Consultants Inc. (GAI) to develop a detailed Traffic Plan in collaboration with both Surry and Isle of Wight County Emergency Services and Transportation administrators (Exhibit F). Feedback and valuable information from Surry and Isle of Wight County officials were implemented, along with field studies by GAI, on traffic patterns, bridge conditions and road use were used to develop two preferred routes for construction traffic (Exhibit F).

3.5 Parking and Staging Areas

The Applicant will ensure adequate parking is provided for construction workers at the Project Site throughout the construction and operation of the Project. In addition to parking, the Project will require a temporary staging area for storing materials, assembling components, refueling equipment, and installing construction trailers. Parking and staging signs will be clearly placed at ingress and egress points to direct traffic to the proper location. The Isle of Wight Conceptual Plan (Exhibit B) details the potential locations of parking areas, staging areas and ingress/egress locations. Exact locations will be refined throughout the planning process and final locations presented in the Final Site Plan.

1.1 Waste and Recycling

Construction waste would be generated from installation of the solar arrays and related facilities. Construction waste generation is expected to be minimal and consist of mostly recyclable materials such as cardboard, steel, and electrical wiring. Cavalier Solar's EPC contractor will carefully disassemble and recycle shipping containers and solar panel packaging to minimize solid waste impacts. The EPC contractor will contract with a waste and recycling service provider to ensure all waste generated from construction of the Project is disposed of in accordance with federal and state regulations. The EPC contractor will store, collect, and dispose of solid waste in such a manner as to prevent fire and health hazards, rodent harborage, insect breeding, accidents, and odor. The EPC contractor will ensure that no littering on the Project Site or neighboring properties will occur during construction.

3.7 Sanitation Services

No wastewater facilities exist at the Project Site and no such facilities would be constructed for the Project. Portable restroom facilities would be provided and maintained by Cavalier Solar's EPC contractor during construction.

3.8 Water Supply

Water will primarily be used for dust control on un-paved roads and will be applied via on-site water trucks. Prior to initiation of construction, Cavalier Solar will evaluate the existing wells, if any, on property to be purchased or leased by Cavalier Solar to ensure there is an adequate supply of water to service the needs of the project. If additional water is required, Cavalier Solar will install a new well to supplement the project's water resource needs.

3.9 Site Stabilization

Site stabilization will be maintained by Cavalier Solar operations and maintenance staff throughout the life of the Project to the specifications of Isle of Wight County and VDEQ. Site stabilization will incorporate native seed mixes to prevent erosion at the Project Site, while reestablishing the existing naturally occurring native vegetation at the Project Site once construction is complete.

4. OPERATIONS AND MAINTENANCE

Upon commissioning, the Project would enter the operational phase. For the duration of the operational phase, the Project would be operated remotely and monitored by on-site staff for security and maintenance purposes. As the Project's PV arrays produce electricity passively with minimal moving parts, maintenance requirements would be limited. Any required planned maintenance would be scheduled to avoid peak load periods, and unplanned maintenance would be typically responded to as needed depending on the event. An inventory of spare components would be readily available.

Other operational details are summarized in the following sections.

4.1 Operations

Cavalier Solar will ensure consistent and effective facility operations by:

- Responding to automated alarms based on monitored data, including actual versus expected tolerances for system output and other key performance metrics
- Communicating with customers, transmission system operators and other entities involved in facility operations
- Designating a site supervisor to monitor and implement emergency and normal shutdown procedures

4.2 Maintenance

Project maintenance performed on the site would consist of equipment inspection and replacement. Maintenance would occur during daylight hours, when possible. However, maintenance activities on the PV modules and DC systems would be typically performed at night. Maintenance program elements include:

- Managing a group of prequalified maintenance and repair firms who can meet the O&M needs of the facility throughout its life
- Implementing a responsive, optimized cleaning schedule
- Responding to plant emergencies and failures in a timely manner
- Maintaining an inventory of spare parts to ensure timely repairs and consistent plant output
- Maintaining a log to effectively record and track all maintenance problems

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- Performing landscape maintenance on the site as required to maintain vegetative screening, and keep grass cut to an appropriate height

4.3 Remote Monitoring of the Project

The Project will be monitored 24-hours a day, 365 days a year from a remote location utilizing a Supervisory Control and Data Acquisition (SCADA) system. Safe, effective and efficient operation of the Project is dependent on the operator receiving accurate information on all environmental measurements which affect production. These measurements include solar irradiation, ambient temperature, back of module temperature, and wind speed. These environmental characteristics are reported by various sensors—pyranometers for irradiance, thermometers for temperatures, and anemometers for wind speed. Other characteristics of the Project are also reported in real time such as current production, voltage, amperage, power quality, and the status of all circuit protection devices. Circuit protection devices include the ability to report the status of their protective relays continuously as are the meters which report the electrical characteristics of the Project.

Signals from all sensors, meters, and circuit protection devices are accumulated in to one or more data loggers which report via secure internet connections to Cavalier Solar's monitoring provider. The software that comprises the monitoring system is set up to send alarms when one or more conditions arise that compromise the safe and efficient operation of the plant. Cavalier Solar has operators on duty in its control center during all hours when production is expected. If an emergency should arise in the off hours, personnel are assigned to take "on-call" messages in the case of emergencies.

4.4 Emergency and Shutdown Procedures

As stated above, Cavalier Solar will develop and implement an Emergency Response Plan for the Project. All employees working on the Project during operations will be trained in emergency and shutdown procedures. Signs will be clearly marked at the Project Site for emergency vehicle ingress and egress. Cavalier Solar will facilitate training for emergency service providers related to the specific hazards of the Project.

4.5 Transportation

The Project will primarily be operated remotely and monitored by on-site staff for security and maintenance purposes. Therefore, transportation to and from the Project Site will be minimal and would not adversely affect existing traffic conditions. As stated above, signs will be clearly marked at the Project Site in the event that emergency vehicles need to access the Project Site. The paved driveways providing access to the Project Site and the unpaved internal road system will be maintained as needed during the life of the Project.

4.6 Water Supply

During operation of the Project, minimal water would be used for solar panel washing on an annual basis and periodically for landscaping. It is anticipated that water will be supplied from newly constructed on-site wells or trucked in from a local provider.

4.7 Waste and Recycling

Waste is not expected to be generated in significant quantity during operation of the Project.

4.8 Operational Noise

Solar energy facilities generate minimal noise during operations. Primary sources of operational noise would include the inverters and solar tracker system and would be limited to daytime hours when the Project is generating electricity. Inverters and the solar tracker system would be located far enough from the property line so as not to increase ambient noise at adjacent residences.

4.9 Light and Glare

The Project would include inward facing, low-level motion detector security lighting at ingress and egress points at the Project Site. Project lighting would be directed onto the Project Site and would be shielded to illuminate intended areas only. The Project switchgear would be lit when staff are at the Project Site working but would not be lit when the station is unstaffed. These lighting measures would reduce the amount of light trespass falling outside the Project Site boundaries.

The glare and reflectance levels from a given PV solar energy facility are decisively lower than the glare and reflectance generated by the standard glass and other common reflective surfaces found in urban environments. The PV panels used for the Project would be dark blue or black with minimal light reflection and contain a microscopically irregular surface designed to trap incident rays of sunlight.

As of 2015, there were over 50 solar projects in operations at airports in 15 different states. Solar installations have been successfully located at or near US international airports in Boston, New York, San Francisco, and Denver, among others. Glint and glare will be minimal and would not impact aircraft flying near the Project Site.

4.10 Security

The Project will be monitored by security staff during operations. An appropriate security fence (not less than six feet in height) with warning signs will be placed around the array of the Project and all electrical equipment will be locked. Cavalier Solar will coordinate with the Isle of Wight County emergency services staff to install an approved, electronically controlled security access gate at the Project Site. As stated above, the Project would include inward facing, low level security lighting and cameras at ingress and egress points. Cavalier Solar proposes to use a chain link fence around the entire perimeter of the facility' panel areas, and a chain link fence with barb wire at the top for the perimeter of the Project Substation.

4.11 Project Decommissioning

Cavalier Solar will decommission and remove the system and its components at the end of the life of the Project. The Project Site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. All decommissioning and restoration activities will adhere to the requirements of the appropriate governing authorities.

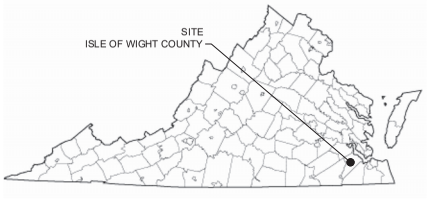
Prior to Final Site Plan approval, Cavalier Solar will submit a decommissioning plan that outlines the process by which all equipment at the Project Site will be removed, unless the landowner desires the any development to remain. The decommissioning plan will discuss options for restoring the Project Site to a condition in accordance with applicable land use regulations in effect at that time. Additionally, Cavalier Solar will secure costs of decommissioning the Project by providing and keeping in force a decommissioning agreement and financial surety, which will include material salvage costs, in a form agreed to by the County Attorney. The amount of the surety bond or other financial security instrument

will reflect the net cost of decommissioning from the date when the Project first began to continuously deliver electric energy to the electric grid for commercial sales ("Commercial Operation Date"), which is the removal cost (including administration costs to the County) minus the market value of the materials that can be resold or recycled ("Salvage Value"). There is significant value in both the equipment on site including solar panels and transformers, as well as the value of the long-term PPA that is anticipated to be signed for this project. These two factors greatly reduce any chance of decommissioning prior to the end of project life. Virginia has aggressive renewable goals, and the need for solar projects in Virginia to provides a large number of potential buyers for an operating project long before any decommissioning takes place. The Applicant will engage a qualified third-party engineering firm every ten (10) years from the Commercial Operation Date, to provide a refreshed decommissioning estimate. If necessary, the Applicant will revise the amount of the financial security by an amount equal to the refreshed net cost of decommissioning the solar facility.

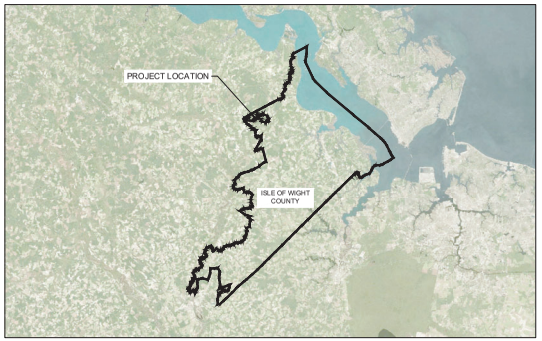
4200 Innslake Dr, Suite 302, Glen Allen, VA 23060| **P** 804.533.6100| www.sPower.com

Exhibit A – Conceptual Site Plan:
See Separate File of 24” x 36” Site Plans

CONCEPT SITE PLANS
CAVALIER SOLAR
COUNTY OF ISLE OF WIGHT, VA



CAVALIER SOLAR	
OWNER	sPOWER
EXISTING ZONING	AGRICULTURAL
PROPOSED USE	SOLAR ENERGY FACILITY
TOTAL POWER TO BE GENERATED	MAX. 240 MEGAWATTS AC (MVac)
TAX MAP PARCEL NUMBER	SEE SHEET C1.1
OVERALL PROJECT SITE DATA	
TOTAL PROJECT AREA	5,050 ACRES
PROJECT AREA IN ISLE OF WIGHT COUNTY	1,774 ACRES
FENCED/PANEL AREA IN ISLE OF WIGHT COUNTY	450 ACRES



VICINITY MAP - COUNTY OF ISLE OF WIGHT, VA
1" = 40,000'

SHEET INDEX	
C0.0	COVER SHEET
C1.0	OVERALL PLAN 1 OF 3 - EXHIBIT A, CONCEPTUAL PLAN
C1.1	OVERALL PLAN 2 OF 3 - EXHIBIT B, ISLE OF WIGHT CONCEPTUAL PLAN
C1.2	OVERALL PLAN 3 OF 3 - EXHIBIT C, ISLE OF WIGHT CONCEPTUAL PLAN
C1.3	SITE PLAN 1 OF 2 - EXHIBIT D, ISLE OF WIGHT ZONING MAP
C1.4	SITE PLAN 2 OF 2 - EXHIBIT D, ISLE OF WIGHT ZONING MAP
C1.5	EXAMPLE LANDSCAPING DETAILS
C1.6	SITE DETAILS

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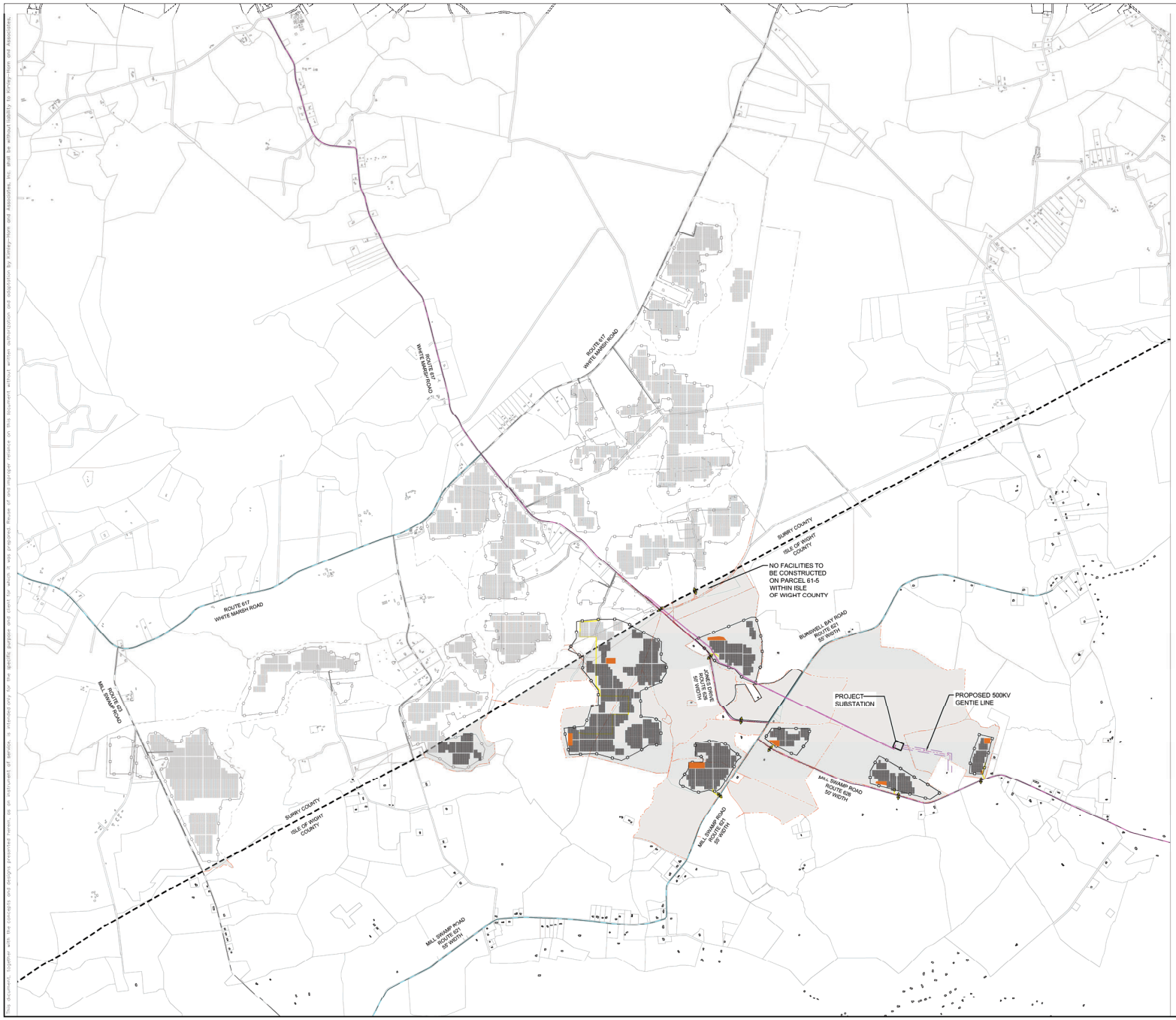
NOT FOR CONSTRUCTION

KHA PROJECT	
DATE	02/02/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

COVER SHEET

CAVALIER SOLAR
PREPARED FOR
S-POWER
ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C0.0



ISLE OF WIGHT NOTES:

1. PROJECT AC SIZE: MAXIMUM 240 MW
2. VARIABLE WIDTH SETBACK ON VERNAL POOLS BASED ON QUALITY OF POOL AS DETERMINED DURING SITE VISIT
3. 50' WETLAND SETBACK.
4. sPOWER TO INSTALL 6' FENCE AROUND PROJECT LIMITS

ISLE OF WIGHT COUNTY NOTES:

5. IN ACCORDANCE WITH ISLE OF WIGHT COUNTY ORDINANCE SECT. 5-5003.M.4.D, ALL EQUIPMENT, ACCESSORY STRUCTURES AND OPERATIONS ASSOCIATED WITH A LARGE SOLAR ENERGY SYSTEM SHALL BE SETBACK AT LEAST 75' FROM ALL PROPERTY LINES AND AT LEAST 125' FROM ANY RESIDENTIAL PARCELS. SEE SHEETS C1.3 - C1.4 FOR MORE DETAIL.
10. RIGHT OF WAY WIDTHS FOR 621 AND 626 ARE 25' FROM ROAD CENTERLINE.
11. 75' SETBACK FROM PUBLIC RIGHT OF WAY, SEE SHEETS C1.3 - C1.4 FOR MORE DETAIL.
12. POTENTIAL WETLANDS AREAS AS INDICATED BY APPLICANT'S DESKTOP REVIEW WILL BE DELINEATED BY APPLICANT AND SUBMITTED TO US ARMY CORPS OF ENGINEERS FOR CONFIRMATION PRIOR TO CONSTRUCTION. WETLANDS CONFIRMED BY THE US ARMY CORPS OF ENGINEERS WILL BE AVOIDED.

PROJECT AREAS	
TOTAL PROJECT AREA	5,050 ACRES
PROJECT AREA WITHIN ISLE OF WIGHT	1,774 ACRES
AREA UNDER PANELS	450 ACRES
CONSTRUCTION LAYDOWN AREAS	10 ACRES

NORTH

GRAPHIC SCALE IN FEET
0 750 1500 3000

LEGEND

- PARCEL BOUNDARIES FOR LAND UNDER OPTION
- ADJACENT NON-PARTICIPATING PARCELS
- PUBLIC ROAD CENTERLINE
- TRAFFIC ROUTE - PREFERENCE 1
- TRAFFIC ROUTE - PREFERENCE 2
- COUNTY LINE
- PROPOSED PANEL FENCE LINE
- PROPOSED MV ROUTE
- PROPOSED 500KV GENTIE LINE
- 500KV GENTIE LINE EASEMENT
- PROPOSED ACCESS ROADS
- PROPOSED LAYDOWN YARDS/PARKING AREAS
- PROPOSED INGRESS/EGRESS LOCATIONS
- EXISTING RESIDENCES
- ISLE OF WIGHT PORTION OF CAVALIER PROJECT
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT IN ISLE OF WIGHT COUNTY
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT IN SURRY COUNTY

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KHA PROJECT	
DATE	02/02/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

CAVALIER SOLAR

PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

OVERALL PLAN 1 OF 3 - EXHIBIT A. CONCEPTUAL PLAN

SHEET NUMBER
C1.0

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DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

OVERALL PLAN 2 OF 3 -
EXHIBIT B, ISLE OF WIGHT
CONCEPTUAL PLAN

CAVALIER SOLAR
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S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.1

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DATE	02/02/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

OVERALL PLAN 3 OF 3 - EXHIBIT C, ISLE OF WIGHT CONCEPTUAL PLAN

CAVALIER SOLAR
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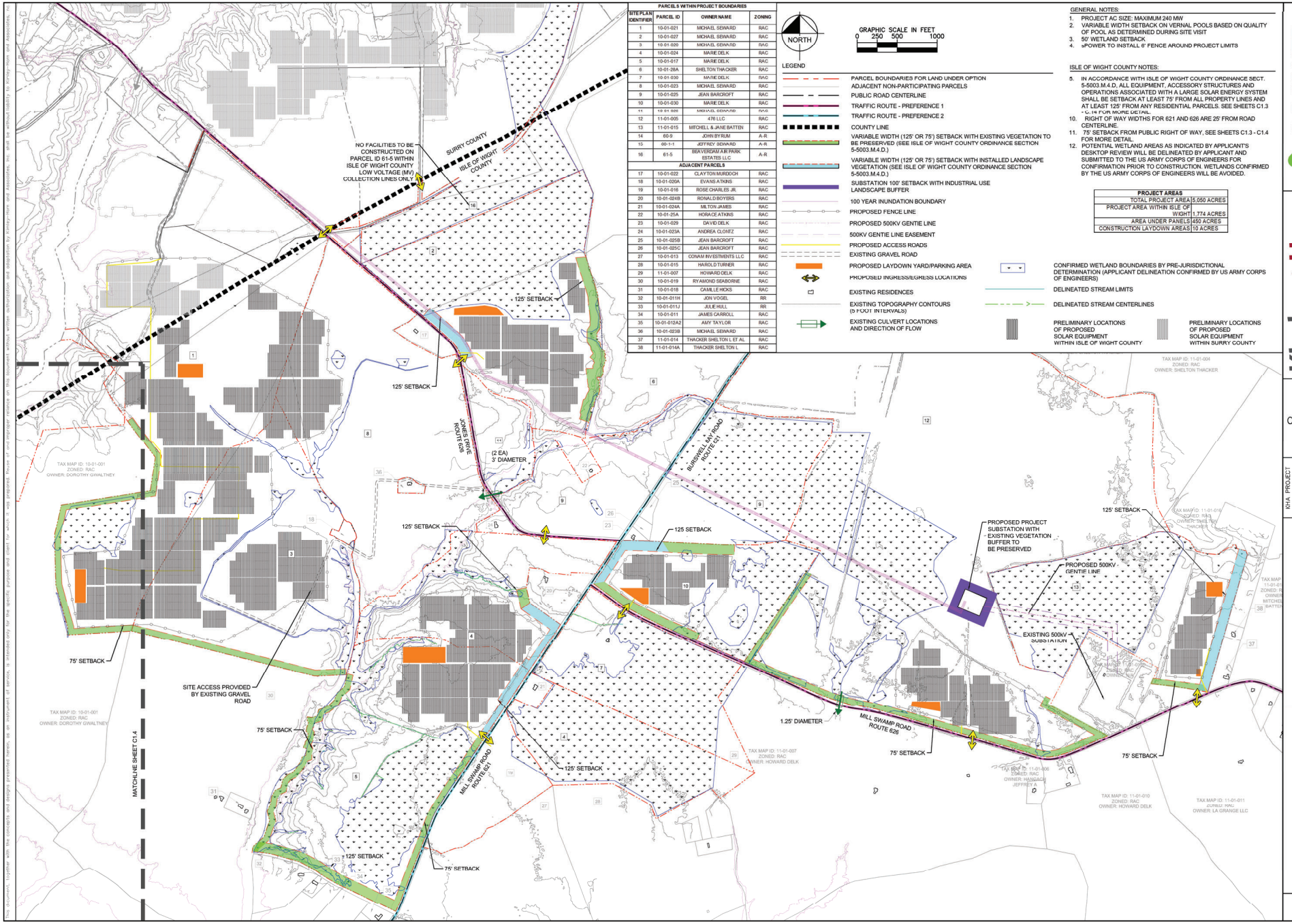
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER C1.2



PARCELS WITHIN PROJECT BOUNDARIES			
SITE PLAN IDENTIFIER	PARCEL ID	OWNER NAME	ZONING
1	10-01-021	MICHAEL SEWARD	RAC
2	10-01-027	MICHAEL SEWARD	RAC
3	10-01-020	MICHAEL SEWARD	RAC
4	10-01-024	MARIE DELK	RAC
5	10-01-017	MARIE DELK	RAC
6	10-01-28A	SHELTON THACKER	RAC
7	10-01-030	MARIE DELK	RAC
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9	10-01-025	JEAN BARCROFT	RAC
10	10-01-030	MARIE DELK	RAC
11	10-01-026	MICHAEL SEWARD	RAC
12	11-01-005	476 LLC	RAC
13	11-01-015	MITCHELL & JANE BATTEN	RAC
14	60-9	JOHN BYRUM	A-R
15	60-1-1	JEFFREY SEWARD	A-R
16	61-5	BEAVERDAM AIR PARK ESTATES LLC	A-R
ADJACENT PARCELS			
17	10-01-022	CLAYTON MURDOCH	RAC
18	10-01-020A	EVANS ATKINS	RAC
19	10-01-016	ROSE CHARLES JR.	RAC
20	10-01-024B	RONALD BOYERS	RAC
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24	10-01-023A	ANDREA CLONTZ	RAC
25	10-01-025B	JEAN BARCROFT	RAC
26	10-01-025C	JEAN BARCROFT	RAC
27	10-01-013	CONAM INVESTMENTS LLC	RAC
28	10-01-015	HAROLD TURNER	RAC
29	11-01-007	HOWARD DELK	RAC
30	10-01-019	RYAMOND SEABORNE	RAC
31	10-01-018	CAMILLE HICKS	RAC
32	10-01-011H	JON VOGEL	RR
33	10-01-011J	JULIE HULL	RR
34	10-01-011	JAMES CARROLL	RAC
35	10-01-012A2	AMY TAYLOR	RAC
36	10-01-023B	MICHAEL SEWARD	RAC
37	11-01-014	THACKER SHELTON L ET AL	RAC
38	11-01-014A	THACKER SHELTON L	RAC

NORTH

GRAPHIC SCALE IN FEET
0 250 500 1000

LEGEND

- PARCEL BOUNDARIES FOR LAND UNDER OPTION ADJACENT NON-PARTICIPATING PARCELS
- PUBLIC ROAD CENTERLINE
- TRAFFIC ROUTE - PREFERENCE 1
- TRAFFIC ROUTE - PREFERENCE 2
- COUNTY LINE
- VARIABLE WIDTH (125' OR 75') SETBACK WITH EXISTING VEGETATION TO BE PRESERVED (SEE ISLE OF WIGHT COUNTY ORDINANCE SECTION 5-5003.M.4.D.)
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- PROPOSED FENCE LINE
- PROPOSED 500KV GENTIE LINE
- 500KV GENTIE LINE EASEMENT
- PROPOSED ACCESS ROADS
- EXISTING GRAVEL ROAD
- PROPOSED LAYDOWN YARD/PARKING AREA
- PROPOSED INGRESS/EGRESS LOCATIONS
- EXISTING RESIDENCES
- EXISTING TOPOGRAPHY CONTOURS (5 FOOT INTERVALS)
- EXISTING CULVERT LOCATIONS AND DIRECTION OF FLOW
- CONFIRMED WETLAND BOUNDARIES BY PRE-JURISDICTIONAL DETERMINATION (APPLICANT DELINEATION CONFIRMED BY US ARMY CORPS OF ENGINEERS)
- DELINEATED STREAM LIMITS
- DELINEATED STREAM CENTERLINES
- PRELIMINARY LOCATIONS OF PROPOSED SOLAR EQUIPMENT WITHIN ISLE OF WIGHT COUNTY
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GENERAL NOTES:

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PROJECT AREAS	
TOTAL PROJECT AREA	5,050 ACRES
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CONSTRUCTION LAYDOWN AREAS	10 ACRES

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KHA PROJECT	
DATE	02/02/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

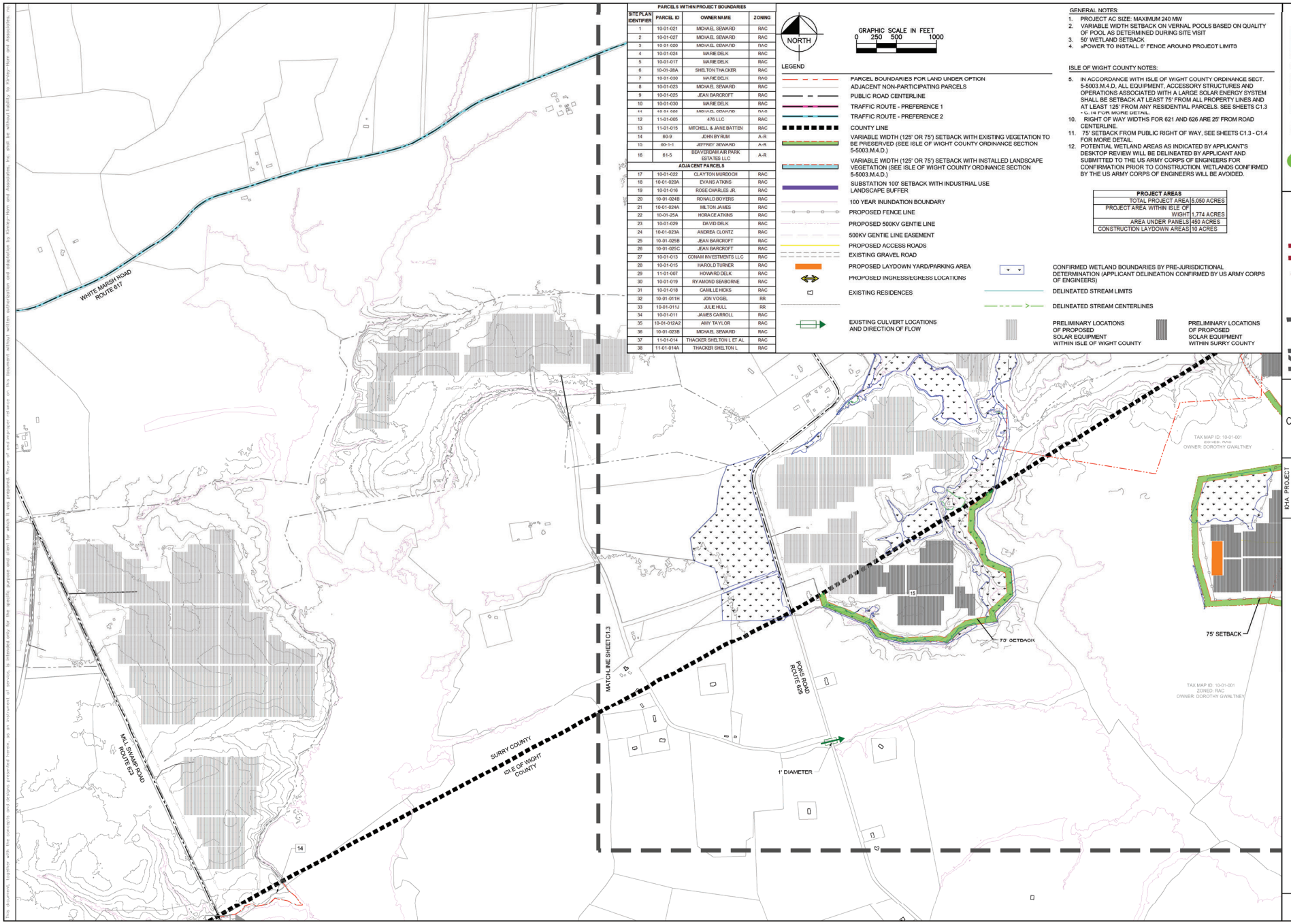
SITE PLAN 1 OF 2 - EXHIBIT D. ISLE OF WIGHT ZONING MAP

CAVALIER SOLAR

PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.3



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37	11-01-014	THACKER SHELTON L ET AL	RAC
38	11-01-014A	THACKER SHELTON L	RAC

NORTH

GRAPHIC SCALE IN FEET
0 250 500 1000

LEGEND

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NOT FOR CONSTRUCTION

KHA PROJECT

DATE	02/02/2021
SCALE	AS SHOWN
DESIGNED BY	SAH
DRAWN BY	SAH
CHECKED BY	SMM

SITE PLAN 2 OF 2 - EXHIBIT D, ISLE OF WIGHT ZONING MAP

CAVALIER SOLAR

PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.4

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1. Frontage zone. ...The frontage zone is a landscaping area located along the entire frontage of the parcel with a width equal to the width of the required front setback or visual buffer for the parcel, as defined by the zoning district or appropriate overlay district.

Frontage Zone
1.75 Points per Linear Foot for Rear and Greater Setbacks
1.75 Points per Linear Foot for 50 Rear and Greater Setbacks

a. There are two (2) Frontage zone classifications.

i. Rural frontage zone applies to all properties which are outside of the designated development service districts and village centers of the county comprehensive plan.

(A) In the rural Frontage zone, properties can, regardless of the required setback, provide one (1) of the following:

(1) Return the zone to native vegetation and leave the zone untouched. Native vegetation shall be defined as a minimum of one and one-quarter (1.25) points of landscaping per linear foot of lot frontage using species native to southeastern Virginia

(2) If the existing vegetation within the zone is deemed adequate to meet the required landscaping points, as determined by the zoning administrator or his designee, the existing vegetation may be maintained, leaving the zone area untouched.

Primary Arterial
120' Minimum Street Right-of-Way
Typical Cross Section - 100' Basic

iii. Civic use types:

(A) Civic use types are required to install a minimum of forty-five (45) points of landscaping per five hundred (500) square feet of buffer zone.

Civic Use Buffer
45 Points per 500 Square Feet

iv. Industrial use types.

(A) Industrial use types are required to install a minimum of one hundred twenty (120) points of landscaping per five hundred (500) square feet of buffer zone.

Industrial Use Buffer
120 Points per 500 Square Feet

CAVALIER SOLAR
PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

EXAMPLE LANDSCAPING DETAILS

KHA PROJECT	
DATE	02/02/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

NOT FOR CONSTRUCTION

SHEET NUMBER C1.5

Kimley»Horn
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11400 COMMERCE PARK DR., SUITE 400
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An AES and AIMCo Company
2180 SOUTH 1300 EAST, SUITE 600
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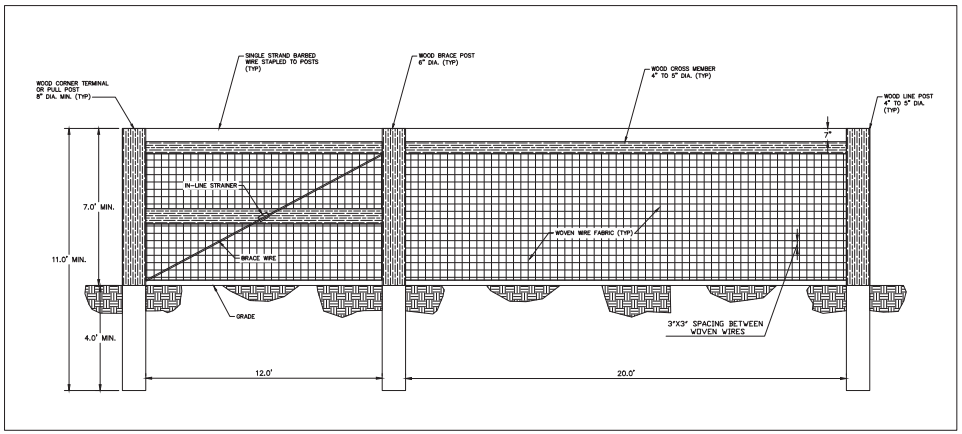

1 AGRICULTURAL STYLE FENCE DETAIL

N.T.S.

1. WOVEN WIRE FABRIC SHALL BE FIXED KNOT FENCE FABRIC WITH 3"X3" OPENINGS.
2. ALL METALLIC PARTS SHALL BE GALVANIZED.
3. TOP WIRE SHALL ALWAYS BE A MINIMUM OF 7' ABOVE GRADE.
4. WITHOUT ADDITIONAL INLINE BRACES, MAXIMUM SPACING BETWEEN POSTS SHALL BE 1,320'.

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

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KHA PROJECT

DATE 02/02/2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY SAH
CHECKED BY SMM

SITE DETAILS

CAVALIER SOLAR
PREPARED FOR
S-POWER
ISLE OF WIGHT COUNTY VIRGINIA

SHEET NUMBER
C1.6

Exhibit B –

Isle of Wight Conceptual Site Plan:

See Separate File of 24” x 36” Site Plans

Exhibit C –

Isle of Wight Zoning Map:

See Separate File of 24” x 36” Site Plans

Exhibit D – Parcel List (Table A) and Legal Descriptions

Exhibit D Table A

APN	Landowner	County	Agreement Type	Acreage under Purchase Agreement	Acreage under Lease Agreement
1-2-1	Philip . Olah, Trustee of the Philip . Olah Sr. Revocable Living Trust	Surry	Purchase Agreement	3.53	A
53-3	eith S. ritt and arianna T. ucup, husband and wife	Surry	Purchase Agreement	12.5	A
53-3	eith S. ritt and arianna T. ucup, husband and wife	Surry	Purchase Agreement	2.	A
10-01-023	ichael A. Seward and Emily . Seward	Surry and Isle of Wight	Purchase Agreement	.91	A
53-	Charles uc les	Surry	Purchase Agreement	102.	100
0-12	ames radley Winder r.	Surry	Purchase Agreement Easement	202.	
1-2-2	eaverdam Air Par Estates, LLC, a Virginia limited liability company	Surry	Purchase Agreement	2 0.9	A
1-3	ichael A. Seward and Emily . Seward	Surry and Isle of Wight	Purchase Agreement	2 5	A
53-5	P. Hunter Cox r.	Surry	Purchase Agreement	309.12	A
53-	ohn Hancoc utual Life Insurance Company, a assachusetts corporation	Surry	Purchase Agreement	1251.53	125. 5
1-2	Elton . Seward r.	Surry	Lease Agreement Easement	A	50. 5
0-20	Elton . Seward r.	Surry	Lease Agreement	A	up to 110
1-1-	Elton . Seward r.	Surry	Lease Agreement	A	
1-1-5	Elton . Seward r.	Surry	Lease Agreement	A	
10-01-025	ean E. arcroft, Sole Trustee, or her Successors in Trust, under the ean E. arcroft Living Trust dated ay 2 , 199	Isle of Wight	Lease Agreement pending easement	A	11
0-21	effrey and elanie Seward	Surry	Lease Agreement	A	95.25
0-1-1	effrey and elanie Seward	Surry and Isle of Wight	Lease Agreement	A	up to 00
1-1	effrey and elanie Seward	Surry	Lease Agreement	A	
10-01-01	arie S. Del and ulie R. Del	Isle of Wight	Lease Agreement	A	up to 2 0
10-01-02	arie S. Del and ulie R. Del	Isle of Wight	Lease Agreement	A	
10-01-030	arie S. Del and ulie R. Del	Isle of Wight	Lease Agreement	A	
10-01-020	ichael A. Seward and Emily . Seward	Isle of Wight	Lease Agreement	A	up to 100
10-01-02	ichael A. Seward and Emily . Seward	Isle of Wight	Lease Agreement	A	
11-01-015	itchell Del atten	Isle of Wight	Lease Agreement easement	A	9 .
59-31	Richard L. yrum and anice . yrum (yrum 50)	Surry	Lease Agreement	A	50. 5
0-9	Richard L. yrum and anice . yrum and ohn H. yrum and eanette . yrum (yrum 3)	Surry and Isle of Wight	Lease Agreement	A	3
11-01-005	, L.L.C., a Virginia limited liability company	Isle of Wight	Easement Lease Agreement Purchase Agreement (substation)	2	5. 1
1-2-	eaverdam Air Par Estates, LLC, a Virginia limited liability company	Surry	Purchase Agreement	15 .5	A
1-2-5	eaverdam Air Par Estates, LLC, a Virginia limited liability company	Surry	Purchase Agreement	1 5	A
1-2-3	eaverdam Air Par Estates, LLC, a Virginia limited liability company	Surry	Purchase Agreement	3.2	A
1-5	eaverdam Air Par Estates, LLC, a Virginia limited liability company	Surry and Isle of Wight	Purchase Agreement	239.03	A
0-1	ames radley Winder r.	Surry	Purchase Agreement	110	A
1-	ohn Hancoc utual Life Insurance Company, a assachusetts corporation	Surry and Isle of Wight	Purchase Agreement	32. 5	A
10-01-021	ichael A. Seward and Emily . Seward	Surry and Isle of Wight	Purchase Agreement	130.	A
10-01-02 A	Shelton L. Thac er and Anne riffin Thac er	Isle of Wight	Easement	A	A

Michael A. Seward and Emily B. Seward, APN 61-3 and part of 10-01-021

All that portion of that certain parcel of land lying within Isle of Wight County described particularly as follows:

SURVEYED DESCRIPTION:

ALL THOSE CERTAIN PIECE OF PARCEL OF LAND SITUATE AND BEING IN THE BLACKWATER DISTRICT OF SURRY COUNTY, AND PART IN THE HARDY DISTRICT OF ISLE OF WIGHT COUNTY, VIRGINIA, CONTAINING 285± ACRES, KNOWN AND DESIGNATED AS ALL THE TAX PARCEL PIN: 61-3 IN SURRY COUNTY AND PART OF TAX PARCEL PIN: 10-01-21 IN ISLE OF WIGHT COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A ROD SET SAID ROD SET BEING THE POINT OF BEGINNING "G" AND BEING APPROXIMATELY 1.13 MILES SOUTH ALONG THE WESTERN RIGHT OF WAY OF BEECHLAND ROAD - STATE ROUTE 626 FROM ITS INTERSECTION WITH WHITE MARSH ROAD - STATE ROUTE 617; THENCE CONTINUING ALONG THE WESTERN RIGHT-OF-WAY OF SAID BEECHLAND ROAD - STATE ROUTE 626, S49°12'36"E, 2059.68 FEET TO A POINT; THENCE LEAVING THE WESTERN RIGHT-OF-WAY OF SAID BEECHLAND ROAD - STATE ROUTE 626, S17°52'30"W, 135.49 FEET TO A POINT; THENCE S11°49'08"W, 134.98 FEET TO A PIPE FOUND; THENCE S20°17'57"W, 907.24 FEET TO A PIPE FOUND; THENCE S16°38'51"W, 219.67 FEET TO A PIPE FOUND; THENCE S19°38'08"W, 182.03 FEET TO A PIPE FOUND; THENCE S17°31'17"W, 358.32 FEET TO A PIPE FOUND; THENCE S15°42'16"W, 189.89 FEET TO A PIPE FOUND; THENCE S10°29'20"W, 289.81 FEET TO A PIPE FOUND; THENCE S46°36'25"W, 271.98 FEET TO A PIPE FOUND; THENCE S52°07'47"W, 129.59 FEET TO A PIPE FOUND; THENCE S77°23'16"W, 119.67 FEET TO A PIPE FOUND; THENCE S72°38'23"W, 67.22 FEET TO A ROD FOUND; THENCE S53°53'11"W, 69.81 FEET TO A PIPE FOUND; THENCE S27°19'44"W, 149.50 FEET TO A PIPE FOUND; THENCE S35°39'06"W, 297.00 FEET TO A POINT; THENCE S27°53'04"W, 573.37 FEET TO A POINT; THENCE S29°53'36"W, 253.58 FEET TO A PIPE FOUND; THENCE S29°30'14"W, 303.82 FEET TO A PIPE FOUND; THENCE S29°51'00"W, 618.88 FEET TO A PIPE FOUND; THENCE S16°51'41"W, 216.68 FEET TO A PIPE FOUND; THENCE S17°08'20"W, 157.70 FEET TO A PIPE FOUND; THENCE S86°30'05"W, 804.00 FEET TO A POINT; THENCE N04°07'14"E, 97.65 FEET TO A POINT; THENCE N16°24'33"W, 159.96 FEET TO A PIPE FOUND; THENCE N15°47'46"W, 242.87 FEET TO A BENT PIPE FOUND; THENCE N15°08'12"W, 148.47 FEET TO A POINT; THENCE N01°35'18"W, 160.44 FEET TO A BENT PIPE FOUND; THENCE N01°39'54"W, 165.85 FEET TO A PIPE FOUND; THENCE N01°01'30"W, 309.81 FEET TO A POINT; THENCE N13°35'17"E, 203.01 FEET TO A BENT PIPE FOUND; THENCE N11°58'39"E, 171.80 FEET TO A BENT PIPE FOUND; THENCE N80°58'22"E, 1127.21 FEET TO A POINT IN THE CENTERLINE OF A DITCH; THENCE FOLLOWING THE CENTERLINE OF SAID DITCH N08°37'51"E, 418.67 FEET TO A PIPE FOUND ALONG THE CENTER OF SAID DITCH; THENCE LEAVING SAID DITCH N37°49'16"W, 291.98 FEET TO A BENT PIPE FOUND; THENCE N37°50'03"W, 161.93 FEET TO A PIPE FOUND; THENCE N35°45'19"W, 118.38 FEET TO A PIPE FOUND; THENCE N35°00'00"W, 394.46 FEET TO A PIPE FOUND; THENCE N25°22'17"W, 123.24 FEET TO A PIPE FOUND; THENCE N28°10'17"W, 41.58 FEET TO A PIPE FOUND; THENCE N36°19'59"E, 158.18

FEET TO A PIPE FOUND; THENCE N29°05'33"E, 175.92 FEET TO A BENT PIPE FOUND; THENCE N61°48'19"W, 169.83 FEET TO A PIPE FOUND; THENCE N71°24'50"W, 110.58 FEET TO A POINT; THENCE N69°01'13"W, 257.00 FEET TO A POINT; THENCE N52°31'13"W, 108.00 FEET TO A POINT; THENCE S85°28'47"W, 134.00 FEET TO A POINT ALONG THE CENTER PASSENGER SWAMP; THENCE APPROXIMATELY 6280 FEET ALONG THE CENTER OF PASSENGERS SWAMP AND HAVING THE FOLLOWING FOUR TIE LINE BEARINGS AND DISTANCES: N03°02'07"W, 172.22 FEET TO A POINT; THENCE N01°55'37"W, 1066.01 FEET TO A POINT; THENCE N19°16'03"E, 1817.57 FEET TO A POINT; THENCE N08°36'29"E, 138.99 FEET TO A POINT; THENCE LEAVING PASSENGER SWAMP S47°50'04"E, 893.17 FEET TO A ROD FOUND; THENCE S47°49'40"E, 483.53 FEET TO A ROD FOUND; THENCE N22°17'35"E, 492.69 FEET TO A ROD SET SAID ROD SAID BEING THE POINT OF BEGINNING "G";

CONTAINING: APPROXIMATELY 285± ACRES OF LAND, MORE OR LESS.

Michael A. Seward and Emily B. Seward, a part of APN 10-01-023

All that portion of that certain parcel of land lying within Isle of Wight County described particularly as follows:

10-01-023 IN PART (SOUTH OF BEECHLAND ROAD - STATE ROUTE 626):

SURVEYED DESCRIPTION:

ALL THAT CERTAIN PIECE OR PARCEL OF LAND SITUATE AND BEING IN THE HARDY DISTRICT, ISLE OF WIGHT COUNTY, VIRGINIA, CONTAINING 46.001 ACRES, KNOWN AND DESIGNATED AS A PORTION OF TAX PARCEL PIN: 10-01-023 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT, SAID POINT BEING ALONG THE WESTERN RIGHT OF WAY OF BEECHLAND ROAD - STATE ROUTE 626 APPROXIMATELY 1.11 MILES FROM ITS INTERSECTION WITH SAID BURRELLS BAY ROAD - STATE ROUTE 621; THENCE LEAVING WESTERN RIGHT-OF-WAY OF SAID BEECHLAND ROAD - STATE ROUTE 626, S17°52'30”W, 135.49 FEET TO A POINT; THENCE S11°04'50”W, 134.98 FEET TO A PIPE FOUND; THENCE S20°17'57”W, 647.22 FEET TO A POINT, SAID POINT BEING THE TRUE POINT AND PLACE OF BEGINNING "I"; THENCE N62°11'31”W, 713.12 FEET TO A POINT; THENCE S34°00'04”W, 4549.15 FEET TO A POINT; THENCE N77°17'27”W, 31.12 FEET TO A POINT; THENCE N73°17'27”W, 95.00 FEET TO A POINT; THENCE N81°02'27”W, 134.00 FEET TO A PIPE FOUND; THENCE N17°08'20”E, 157.70 FEET TO PIPE FOUND; THENCE N16°51'41”E, 216.68 FEET TO A PIPE FOUND; THENCE N29°51'00”E, 618.88 FEET TO A PIPE FOUND; THENCE N29°30'14”E, 303.82 FEET TO A PIPE FOUND; THENCE N29°53'36”E, 253.58 FEET TO A POINT; THENCE N27°53'04”E, 573.37 FEET TO A POINT; THENCE N35°39'06”E, 297.00 FEET TO A PIPE FOUND; THENCE N27°19'44”E, 149.50 FEET TO A PIPE FOUND; THENCE N53°53'11”E, 69.81 FEET TO A ROD FOUND; THENCE N72°38'23”E, 67.22 FEET TO A PIPE FOUND; THENCE N77°23'16”E, 119.67 FEET TO A PIPE FOUND; THENCE N52°07'47”E, 129.59 FEET TO A PIPE FOUND; THENCE N46°36'25”E, 271.98 FEET TO A PIPE FOUND; THENCE N10°29'20”E, 289.81 FEET TO A PIPE FOUND; THENCE N15°42'16”E, 189.89 FEET TO A PIPE FOUND; THENCE N17°31'17”E, 358.32 FEET TO A PIPE FOUND; THENCE N19°38'08”E, 182.03 FEET TO A

PIPE FOUND; THENCE N16°38'51”E, 219.67 FEET TO A PIPE FOUND; THENCE N20°17'57”E, 260.02 FEET TO A POINT, SAID POINT BEING THE POINT TRUE POINT AND PLACE OF BEGINNING "I", CONTAINING 46.001 ACRES, MORE OR LESS.

AND

10-1-023 IN PART (NORTH OF BEECHLAND ROAD - STATE ROUTE 626)

SURVEYED DESCRIPTION:

ALL THAT CERTAIN PIECE OR PARCEL OF LAND SITUATE AND BEING IN THE BLACKWATER DISTRICT OF SURRY COUNTY, VIRGINIA, CONTAINING 0.917 ACRES, KNOWN AND DESIGNATED AS A PORTION OF TAX PARCEL PIN: 10-01-023 AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A PIPE FOUND, SAID PIPE FOUND BEING THE POINT OF BEGINNING "H" AND BEING APPROXIMATELY 1.05 MILES NORTH ALONG THE EASTERN RIGHT-OF-WAY OF BEECHLAND ROAD - STATE ROUTE 626 FROM ITS INTERSECTION WITH BURRELLS BAY ROAD - STATE ROUTE 621; THENCE LEAVING THE WESTERN RIGHT-OF-WAY OF SAID BEECHLAND ROAD - STATE ROUTE 626, N49°54'42”E, 275.85 FEET TO A POINT IN THE CENTER OF A DITCH AND HAVING PASSED THROUGH A PIPE FOUND ON LINE AT 246.40 FEET FROM THE PREVIOUS PIPE FOUND; THENCE ALONG THE CENTER OF SAID DITCH, S01°40'14”E, 369.45 FEET TO A ROD FOUND ALONG THE EASTERN RIGHT-OF-WAY OF SAID BEECHLAND ROAD - STATE ROUTE 626; THENCE CONTINUING ALONG THE EASTERN RIGHT-OF-WAY OF SAID BEECHLAND ROAD - STATE ROUTE 626, N49°10'17”W, 293.14 FEET TO A PIPE FOUND, SAID PIPE FOUND BEING THE POINT OF BEGINNING "H", CONTAINING 0.917 ACRES, MORE OR LESS.

Michael A. Seward and Emily B. Seward, part of APN 10-01-020

A part of all that portion of that certain parcel of land lying within Isle of Wight County described particularly as follows:

That certain tract or parcel of land situate in Blackwater Magisterial District, Surry County, Virginia, and Hardy Magisterial District, Isle of Wight County, Virginia and more particularly described as follows: BEGINNING at a point at which the run of Parson (Pouches) Swamp passes under the centerline of Virginia State Route #626; thence along the centerline of Route #626 the following courses and distances to another point in said Route: S 34° 12’ 00” E. 339.90 feet, a curve to the right which a radius of 818.51 feet with a circumference of 154.53 feet, 154.76 feet in length, S. 45° 02’ 00” E. 240.86 feet, a curve to the left with a radius of 2864.79 feet and a circumference of 233.27 feet, 233.33 feet in length, S. 40° 22’ 00” E. 264.07 feet, and S. 41° 43’ 00” E. 2072.50 feet to a point; thence the following courses and distances ending at an iron pipe at the point at which two fences intersect, S. 25° 11’ 09” W. 154.71 feet to an iron pipe, S. 19° 20’ 27” W. 135.15 feet to an iron pipe, S. 27° 46’ 51” W. 907.16 feet to an iron pipe, S. 24° 10’ 20” W. 219.95 feet to an iron pipe, S. 27° 04’ 52” W. 182.28 feet to an iron pipe, S. 25° 02’ 29” W. 358.74 to an iron pipe, S. 23° 09’ 32” W. 189.22 feet to an iron pipe, S. 17° 59’ 47” W. 289.87 feet to an iron pipe, S. 54° 05’ 09” W. 271.99 feet to an iron pipe, S. 59° 36’ 00” W. 129.54 feet to an

iron pipe, S. 84° 53’ 46” W. 119.85 feet to an iron pipe, S. 83° 44’ 34” W. 61.90 feet to an iron pipe, S. 43° 12’ 19” W. 220.87 feet to an iron pipe, S. 43° 12’ 19” W. 297 feet to an iron pipe, S. 36° 38’ 50” W. 219.87 feet to a pine tree, S. 34° 41’ 10” W. 352.58 feet to an iron pipe, S. 37° 26’ 49” W. 826.70 feet to a pine tree, S. 36° 36’ 29” W. 350.87 feet to an iron pipe, S. 24° 22’ 20” W. 216.58 feet to an iron pipe, and S. 24° 41’ 44” W. 158.29 feet to an iron pipe; thence along the northern line of the property of the adjoining property owner S. 87° 36’ 13” W. 804 feet to a point constituting the northeast corner of the property of the adjoining property owner; thence the following courses and distances: N. 06° 33’ 17” E. 187 feet to an iron pipe, N. 8° 50’ 59” W. 159.71 feet to an iron pipe; N. 8° 05’ 56” W. 391.58 feet to an iron pipe; thence the following courses and distances: N. 5° 50’ 36” E. 326.24 feet, N. 6° 27’ 53” E. 309.86 feet, and N. 20° 37’ 45” E. 380.43 feet, thence N. 88° 40’ 57” E. 1123.27 feet to a point in the centerline of a ditch; thence along the centerline of said ditch the following courses and distances to an iron pipe: N. 16° 07’ 38” E. 106 feet to an iron pipe, N. 16° 06’ 19” E. 312.67 feet to an iron pipe; N. 30° 18’ 52” W. 292 feet to an iron pipe; thence the following courses and distances to an iron pipe in or near a woods trail: N. 30° 21’ 16” W. 162.28 feet to an iron pipe, N. 28° 13’ 45” W. 118.17 feet to an iron pipe, N. 27° 30’ 33” W. 394.89 feet to an iron pipe, N. 18° 04’ 44” W. 122.84 feet to an iron pipe, N. 20° 01’ 23” W. 41.60 feet to an iron pipe, N. 43° 54’ 10” E. 158.12 feet to an iron pipe, N. 36° 26’ 23” E. 176.12 feet to an iron pipe; thence the following courses and distances to a point in the run of a Parson (Pouches) Swamp: N. 53° 02’ 25” W. 169 feet to an iron pipe, N. 66° 02’ 25” W. 112 feet to an iron pipe, N. 61° 32’ 25” W. 257 feet to a point, N. 45° 02’ 25” W. 108 feet to a point; and N. 87° 02’ 25” W. 134 feet to a point; thence along the run of Parson (Pouches) Swamp in a northerly direction the following courses an distances to the point of beginning: N. 32° E. 179 feet, N. 1° W. 217 feet, N 10 ½° E. 320 feet, N. 7°W. 257 feet, N. 11 ½° W. 193 feet, N. 49° E. 272 feet, N. 20½° E. 301 feet, N 17½° W. 279 feet, N. 36° E. 278 feet, N. 42½° E. 228 feet, N. 24° E. 160 feet, N. 47° E. 185 feet, N. 1¾° E. 236 feet, N. 16¼° E. 207 feet, N. 31° E. 233 feet and N. 40¾° E. 300 feet, containing 298.59 acres.”

Less and Except Parcel 3B conveyed by deed dated March 10, 2011, recorded in the Clerk's Office of Surry County in Deed Book 244, at page 239. (Tax Parcel 61-3B)

Less and Except Parcel 3A as shown on "Plat of Parcel 3A and Parcel 3B", Being a part of the Property of Michael A. Seward and Emily B. Seward Deed Book 207 Page 130, dated October 1, 2008, and recorded in the Clerk's Office of Surry County in Map Book 7, at page 249.

Less and Except 25' Highway Dedication (0.55 ac) as shown on "Plat of Parcel 3A and Parcel 3B", Being a part of the Property of Michael A. Seward and Emily B. Seward Deed Book 207 Page 130, dated October 1, 2008, and recorded in the Clerk's Office of Surry County in Map Book 7, at page 249.

Less and Except that portion of property containing 4.19 acres, more or less conveyed to Mary E. Barham, dated February 14, 2017, recorded in Deed Book 276, at page 15, plat recorded as Instrument Number 170040312.

It being the same property conveyed to Michael A. Seward and Emily B. Seward by deed from Elton B. Seward, Jr., Michael A. Seward and Jeffrey A. Seward, Co-Executors under the Will of E. Baxter Seward, deceased dated May 1, 2006 and duly recorded May 4, 2006 in the County of Surry in Deed Book 207 page 130 and in Isle of Wight County as Instrument Number 063242.

Elton Baxter Seward aka E. Baxter Seward departed this life 2/16/05 and by his Last will and Testament recorded in Surry County WB 25, page 261 and Isle of Wight County WB 05-61, devised property to his three sons Elton B. Seward, Jr., Michael A. Seward and Jeffrey A. Seward.

The said Dorothy Beale Seward departed this life on February 8, 1996, property passed to her husband, Elton Baxter Seward, by operation of law.

It being the same property conveyed to Elton Baxter Seward and Dorothy Beale Seward by deed from Champion International Corporation dated August 11, 1994 and duly recorded September 9, 1994 in Surry County Clerk's Office in Deed Book 133 page 47:7 and in Isle of Wight County in Deed Book 442 page 895.

Michael A. Seward and Emily B. Seward, part of APN 10-01-027.

A part of all that portion of that certain parcel of land lying within Isle of Wight County, described particularly as follows:

One hundred thirty (130) acres by estimate, known as 'Grays', being the same tract described as 'First' in a deed dated November 21, 1941, from Mattie C. Gale and recorded in Deed Book 119 at Page 319 of the records of the Circuit Court for Isle of Wight County.

It being the same property conveyed to Michael A. Seaward from Elton B. Seward, Jr., Michael A. Seward and Jeffrey A. Seward, Co-Executors under the Will of E. Baxter Seward, deceased by deed dated May 30, 2006, recorded June 8, 2006 in the aforesaid Clerk's Office as Instrument Number 064318.

Shelton L. Thacker and Anne Griffin Thacker, APN 10-01-028A

All that certain tract, piece or parcel of real estate, together with all rights of way, privileges and easements appurtenant thereto or in anywise appertaining thereto, containing sixty-three (63) acres, more or less, sale being in gross and not by the acre, this conveyance being a hazard as to acreage, and situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, being bounded on the North by a tract containing 183.76 acres which was conveyed by the part of the first part to F. Perry and Son Lumber Co. Inc by deed dated December 8, 1977, and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, on December 9, 1977, that conveyance being shown on a plat entitled "Plat Showing Property for Fermer Perry Hardy Magis. District Isle of Wight Co. Virginia Cobham Magis. District Surry County, Virginia, Scale 1" = 200' Nov. 30, 1977, Survey by S.V. Camp, III, and Associates C.L.S. Courtland, Va. Total Area - 183.76 acres" the Southern boundary of said plat forming the Northern boundary of the real estate conveyed. The real estate herein conveyed is bounded on the Southeast by Highway 621, on the Southwest by lands now or formerly of Nancy Delk Hall, and on the West by lands now or formerly of Edith Gale Beale.

Less and Except that portion for a right of way as shown on Map Book 8, at page 40.

Less and Except any portion of the property that lies in Surry County, Virginia.

It being the same property conveyed to Shelton L. Thacker and Anne Griffin Thacker from Ralph Wyatt Thacker and Minnie M. Thacker, James William Thacker and Elizabeth Frances Thacker, Herbert Lee Thacker and Janette K. Thacker, Rachel Amelia Thacker Joyner (erroneously designated in the will of her late father, Herbert M. Thacker, as "Rachel Lelia T. Joyner") and

Shirley Joyner, Florine Anne Thacker Jones, Edward Crouch Thacker and Dorotha A. Thacker, Fletcher Thacker Greenwood and Oliver C. Greenwood, Helen Elizabeth Thacker Johnson and Herbert Nelson Johnson, Betty Bennett Thacker Drake and Thomas E. Drake, by Ralph Wyatt Thacker, their Attorney in Fact, by deed dated December 12, 1977, recorded in the Circuit Court of Isle of Wight County, on December 14, 1977 in Deed Book 250, at page 247.

The said Miriam B. Thacker departed this life on September 8, 1975.

The said Herbert M. Thacker departed this life on September 28, 1960.

It being the same property conveyed to Herbert M. Thacker from Jack M. Gale and Martha Delk Gale by deed dated October 14, 1943, recorded October 15, 1943 in the Clerk's Office of the Circuit Court of Isle of Wight County in Deed Book 120, at page 364.

476, LLC, a Virginia limited liability company, APN 11-01-005

All those two certain contiguous and adjacent tracts, pieces or parcels of land situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, known as the "Thomas H. Carroll tract" and the "Eva Allen Todd tract", containing two hundred three (203) and two hundred eighty one (281) acres, more or less, respectively, according to a survey thereof made by Roy Brinkley, surveyor, dated April 25, 1940, a copy of the plat of said survey was attached to the deed recorded in the Clerk's Office of the Circuit Court of Isle of Wight County in Deed Book 119, page 232, which said tracts being consolidated constitute one tract of four hundred eighty four (484) acres, and more particularly described as follows, to-wit: Beginning at a pine on the North side of the road, or highway, leading from Sycamore Cross to Smithfield, which said pine is a corner or Caleb Batten and the tract of land hereby conveyed, and running thence S 72 degrees W 900 feet; thence S 70 degrees 30' West 100 feet; thence S 84 degrees 30' W 100 feet; thence N 86 degrees W 100 feet; thence N 71 degrees 30' W 100 feet; thence N 65 degrees W 1575 feet; thence N 65 degrees W 425 feet; thence N 72 degrees 15' W 400 feet; thence N 69 degrees W 100 feet; thence N 63 degrees W 100 feet; thence N 57 degrees W 1284 feet to a culvert; thence N 40 degrees E 1696 feet along a line of marked trees to an iron axle; thence N 65 degrees W 486 feet; thence N 31 degrees 15' E 371 feet to a gum; thence N 26 degrees E 098 feet to a maple; thence N 22 degrees E 154 feet to a pine; thence N 19 degrees 30' E 240 feet to a pine; thence N 36 degrees 30' E 252 feet to a gum; thence N 45 degrees E 093 feet to a gum; thence N 40 degrees E 251 feet to gum; thence N 21 degrees 30' E 098 feet to a gum; thence N 14 degrees E 101 feet to a black gum; thence N 80 degrees W 707 feet to a maple; thence N 81 degrees W 115 feet to a pine; thence N 73 degrees 30' W 417 feet to a pine; thence N 59 degrees W 135 feet to a pine; thence N 55 degrees 30' W 200 feet to a gum on the East side of the road leading from Delk's Store to Burrell's Bay; thence down the said side of said road N 39 degrees 30' E 600 feet; thence N 44 degrees E 200 feet; thence N 48 degrees 30' E 400 feet; thence N 68 degrees E 200 feet; thence N 74 degrees E 300 feet; thence N 80 degrees E 1300 feet; thence N 66 degrees 30' E 128 feet; thence N 47 degrees E 100 feet; thence N 41 degrees 30' E 100 feet; thence leaving said road S 12 degrees W 500 feet to a pine; thence S 3 degrees W 187 feet to a pine; thence S 1 degree W 186 feet to a pine; thence East down a ditch S 76 degrees E 1041 feet to an oak; thence leaving said ditch S 53 degrees E 547 feet to an oak; thence S 43 degrees 30' E 289 feet to a pine; thence S 50 degrees E 262 feet to a gum; thence S 52 degrees 15' E 317 feet to a pine; thence East 158 feet; thence N 89 degrees E 303 feet; thence S 73 degrees 30' E 168 feet to a maple on ditch bank; thence S 13 degrees W 094 fee to an oak; thence S 8 degrees 30' W 626 feet to a pine; thence South 162 feet to a red oak; thence S 8 degrees W 109

feet; thence S 9 degrees 30' W 170 feet to a pine; thence S 7 degrees 30' E 112 feet to a pine; thence S 2 degrees E 130 feet to an oak; thence S 22 degrees E 370 feet; thence S 27 degrees E 097 feet to an oak; thence S 35 degrees E 087 feet to a pine; thence S 42 degrees 30' E 155 feet to an oak; thence S 70 degrees 30' E 233 feet; thence S 76 degrees 47 feet W 250 feet to a maple; thence S 76 degrees 47 W 199 feet to an oak; thence S 68 degrees 54' W 123 feet to a pine; thence S 76 degrees 32' W 019 feet to a pine; thence S 76 degrees 32' W 068 feet to a pine; thence S 76 degrees 32' W 148 feet to a maple; thence S 74 degrees 11' W 115 feet; to an oak; thence S 78 degrees 22' W 500 feet to a black gum; thence S 37 degrees 46' W 405 feet to a pine; thence S 50 degrees 48' W 185 feet to a maple; thence S 37 degrees 34' W 043 feet to a pine; thence S 49 degrees 52' W 185 feet to a pine; thence S 48 degrees 24' W 092.5 feet to a pine; thence S 10 degrees W 245 feet to an oak; thence S 65 degrees 15' E 050 fee to a pine; thence S 51 degrees 53 feet E 036 feet to a dead pine; thence S 46 degrees 03' E 383 feet to a pine; thence S 51 degrees 15' E 148 feet to a pine; thence S 49 degrees E 555 feet to a pine; the point of beginning.

LESS, SAVE AND EXCEPT 7.39 acres conveyed to Virginia Electric and Power by deed dated December 13, 1979 and recorded January 23, 1980 and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia in Deed Book 266, page 193; and further by Deed of Correction dated January 13, 1982 recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia in Deed Book 278, Page 375.

EXCEPTING THEREFROM all rights to any marketable timber located on the previously described property.

It being the same property conveyed to 476, LLC by Q/C Deed from Blue Sky Timber Properties LLC dated September 28, 2004 and duly recorded September 30, 2004 in the aforesaid Clerk’s Office as Instrument Number 046947. (Rights, title and interest in Minerals)

It being the same property conveyed to 476, LLC by Q/C Deed from Sustainable Forests, L.L.C. dated September 28, 2004 and duly recorded September 30, 2004 in the aforesaid Clerk’s Office as Instrument Number 046946.

It being the same property conveyed to 476, LLC by Timber Deed from Blue Sky Timber Properties LLC dated September 28, 2004 and duly recorded September 30, 2004 in the aforesaid Clerk’s Office as Instrument Number 046945.

(Marketable Timber)

It being the same property conveyed to 476, LLC by Deed of Bargain and Sale from Blue Sky Timber Properties LLC dated September 28, 2004 and duly recorded September 30, 2004 in the aforesaid Clerk’s Office as Instrument Number 046944.

Jean E. Barcroft, Sole Trustee, or her Successors in Trust, under the Jean E. Barcroft Living Trust dated May 28, 1996, APN 10-01-025

All of that certain tract, piece or parcel of land, situate, lying and being in Hardy Magisterial District, Isle of Wight County, Virginia, known as the Crouch Tract, containing 125.85 acres according to a survey thereof made on March 15, 1943, by Roy Brinkley Surveyor, a plat of said survey being duly of record in the Clerk's Office hereinafter mentioned in Plat Book 2, at page 242, the said tract of land being bounded and described with reference to the said plat of survey as follows: Beginning at an iron pin on the Northeast side of the highway leading from Delk's

Crossroad to the Burwell's Bay road near a branch, and running thence S. 28 E. 532 feet to a point; thence S. 45 degrees E. 060 feet to a point; thence S. 80 degrees E. 1300 feet to a point on the Eastern side of Burwell's Bay road; thence S. 79 degrees 30' E. 505 feet to a pine; thence 79 degrees E. 487 feet to a pine; thence S. 80 degrees 30' E. 252 feet to an oak; thence S. 80 degrees 15' E. 361 feet to a point; thence S. 86 degrees E. 100 feet to a pine; thence S. 89 degrees E. 095 feet to a pine; thence S. 89 degrees 30' E. 105 feet to a pine; thence N. 86 degrees E. 111 feet to an iron pin; a corner; thence running N. 31 degrees 15' 371 feet to a gum; thence N. 26 degrees E. 098 feet to a maple; thence N. 22 degrees E. 154 feet to a pine; thence N. 19 degrees 30' E. 240 feet to a pine; thence N. 36 degrees 30' E. 252 feet to a gum; thence N. 45 degrees E. 093 feet to a gum; thence N. 40 degrees E. 251 feet to a gum; thence N. 21 degrees 30' E. 098 feet to a gum; thence N. 14 degrees E. 101 feet to a B. gum, a corner; thence running N. 80 degrees W. 707 feet to a maple; thence N. 81 degrees W. 115 feet to a pine; thence N. 73 degrees 30' W. 417 feet to a pine; thence N. 59 degrees W. 135 feet to a pine; thence N. 55 degrees 30' W. 200 feet to a gum on the Eastern side of the Burwell's Bay road in a branch; thence following said branch across the said Burwell's Bay road, the run of the said branch being the property line N. 56 degrees W. 120 feet to a point; thence N. 58 degrees 30' W. 163 feet to a point; thence S. 78 degrees W. 173 feet to a point; thence S. 71 degrees 15' W. 152 feet to a point; thence S. 39 degrees W. 154 feet to a point; thence S. 61 degrees 15' W. 153 feet to a point; thence S. 80 degrees W. 100 feet to a point; thence S. 51 degrees 30' W. 155 feet to a point; thence W. 176 feet to a point; thence N. 76 degrees W. 164 feet to a point; thence S. 78 degrees W. 125 feet to a point; thence N. 69 degrees W. 140 feet to a point in the intersection of the said branch with another branch; thence running up and along the last mentioned branch N. 24 degrees W. 074 feet to an iron pin, a corner; thence leaving the said branch and running N. 88 degrees W. 212 feet to a gum; thence N. 84 degrees W. 186 feet along a fence to an oak; thence continuing along the said fence W. 350 feet to an iron pin, a corner; thence running S. 2 degrees W. 380 feet across a branch to a gum; thence S. 17 degrees 30' W. 261 feet to a pine at a wire fence; thence following the said wire fence S. 68 degrees W. 366 feet to a pine stump; and thence S. 82 degrees W. 151 feet to an iron pin at the point of beginning, the said tract of land lying on both sides of said Burwell's Bay road.

LESS, SAVE AND EXCEPT a small triangular shaped portion of the said tract of land conveyed to Earl T. Hall by deed from Alfred M. Delk, et ux., dated April 19, 1957, and recorded in the Clerk's Office aforesaid in Deed Book 151, at page 226.

LESS, SAVE AND EXCEPT that certain lot, piece or parcel of land containing 1.332 acres conveyed to Richard B. Norman and Patricia S. Norman, by deed dated December 1, 1975 recorded in Deed Book 235, at page 704.

LESS, SAVE AND EXCEPT that certain lot, piece or parcel of land containing 2.55 acres conveyed to Roger Dean Atkins, by deed dated May 10, 1999 recorded as Instrument Number 000004425.

LESS AND EXCEPT the standing timber to Ashton Lewis Lumber Company, by deed dated July 31, 2015, and recorded August 13, 2015 in Deed recorded as Instrument Number 150003311

LESS AND EXCEPT that certain lot, piece or parcel of land containing 5.39 acres, more or less, conveyed to the Commonwealth of Virginia, by deed dated February 26, 1947 and recorded August 11, 1947 in Deed recorded in Deed Book 127, page 593.

It being the same property conveyed to Jean E. Barcroft, Sole Trustee, or her Successors in Trust, under the Jean E. Barcroft Living Trust dated May 28, 1996 by deed from Nancy Delk Hall dated July 30, 2015 and duly recorded August 5, 2015 in the aforesaid Clerk's Office as Instrument Number 150003160.

Mitchell Delk Batten, APN 11-01-015

All of that portion of land situated in Isle of Wight County, Virginia, known as Isle of Wight County, VA Tax Assessor's Parcel Identification Number (APN) 11-01-015, lying west of land now or formerly owned by Shelton and Anne Thacker more particularly described as APN 11-01-014, l 1-0l-014A, and 11-01-014B.

Said lands being more particularly described and depicted as "T.P. 11-01-015 Section C", containing 95.25 acres, more or less, on that certain Plat Map entitled "Plat Showing Boundary Survey of Tax Parcel 11-01-015 for Mitchell Delk Batten, Trustee of the Jane Delk Batten Revocable Trust", said Plat Map being dated August 10, 2011, and recorded on June 7, 2012, as Plat Reference Number 2012- 41-1, in the Clerk's Office of the District Court of lsle of Wight County, Virginia, and being a portion of the same property conveyed to Mitchell Delk Batten by deed from Jane Delk Batten, Trust Settlor and Mitchell Delk Batten, as Trustee of the Jane Delk Batten Revocable Trust u/a/d March 18, 2005, dated May 20, 2014, and duly recorded June 3, 2014, in the aforesaid Clerk's Office as Instrument Number 140001864.

Marie S. Delk and Julie R. Delk, APN 10-01-017

PARCEL ONE - Tax ID #10-01-017

"All that certain tract, piece or parcel of land lying, being and situate in Hardy Magisterial District, County of Isle of Wight, State of Virginia, containing one hundred and twenty five (125) acres, be the same more or less, and which is bounded as follows, to-wit: on the North by the lands of Miss S. P. Ward; on the East by the County road leading from Smithfield to Mill Swamp Church; on the South by the lands belonging to B. G. Carroll and brothers, and on the West by the lands belonging to M. A. Delk and J. S. Gale."

The above described parcel is subject to a boundary line agreement dated September 3, 1948 by and between R. M. Carroll, a widower, James M. Carroll and Thelma D. Carroll, his wife and T. H. Delk and Mamie J. Delk, his wife, and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 130 at page 226.

The above described parcel is further subject to a deed of easement for ingress and egress dated August 1, 2008 by and between Dan G. Delk, married, Grantor and James M. Carroll, Jr., individually and as Trustee under the Carroll Family Living Trust dated March 5, 2002 and recorded in the aforesaid Clerk's Office as Instrument # 08-5031.

It being the same property conveyed to T. H. Delk by deed of George W. Delk and A. Carey Delk, his wife, dated August 19, 1927 and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 99 at page 234.

T. H. Delk (a/k/a Thomas H. Delk, Sr.) died testate on February 20, 1952 and by the terms of his Will recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Will Book 36 at page 79, he devised a life estate in his real property acquired in Deed Book 99 at page 234 to his wife, Mamie J. Delk. Upon her death, he directed that said property pass to his son, Thomas H. Delk, Jr. upon the condition that he pay the sum of $2,000.00 in cash to his son, Robert J. Delk. A list of heirs for Thomas H. Delk, Sr. is recorded in the aforesaid Clerk's Office in Deed Book 137 at page 442.

Mamie J. Delk died testate on July 13, 1956. Her Will is recorded in the aforesaid Clerk's Office in Will Book 36 at page 255.

Thomas H. Delk, Jr. died testate on August 12, 1966 and by the terms of his Will recorded in the aforesaid Clerk's Office in Will Book 37 at 326, he devised a life estate in his real property to his brother, Robert J. Delk. Upon his death, he directed that said property pass to his nephew, Dan G. Delk, upon the condition that he pay $2,500.000 to his niece, Nancy Delk Hall, within twelve months after the date of the death of Robert J. Delk.

Robert J. Delk died on May 29, 1971. His Will was recorded in the aforesaid Clerk's Office in Will Book 38 at page 81, evidence of payment to Nancy Delk Hall was recorded in Will Book 38 at page 103, and an Affidavit was recorded in Deed Book 208 at page 370.

Dan G. Delk died testate on February 23, 2011 and by the terms of his Will, a copy of which is recorded in the aforesaid Clerk's Office as Instrument No. 110000079 (CWF 11-79), he devised his real property to his wife, Marie S. Delk.

Marie S. Delk and Julie R. Delk, APNs 10-01-024

PARCEL TWO – TAX ID #10-01-024

"FIRST: Beginning at a point on the road leading from Mill Swamp Church to Burwell's Bay and at the center of a ditch which partly crosses the field lying South of the dwelling house; running thence in a Westerly direction down the center of said ditch to where the said ditch empties into a branch; running thence in a more Westerly direction down said branch along a line of marked trees to a Black Gum in the center of the Swamp, a corner on the lands of C. M. C. Gale; running thence in a Northerly direction up the meanderings of said swamp it being the dividing line between the lands herein described and the land belonging to C.M.C. Gale, to the head of a branch, a corner on the land of C. M. C. Gale and the lands herein described; running thence in an Easterly direction along the lands of the said C. M. C. Gale to the lands of W. H. Gale, a corner on what is known as the Surry road; running thence along the lands of the said W. H. Gale and down the Surry Road to a corner on the said Burwell's Bay Road running thence down the said Burwell's Bay Road, toward Mill Swamp Church, to the center of said ditch, the point of beginning.

SECOND: Beginning at a red oak on the East side of the County road leading from Mill Swamp Church to Burwell's Bay, and opposite the point at the center of the said ditch above mentioned; running thence in an Easterly direction and parallel with the County road leading from Burwell's Bay road to Smithfield to the line dividing the land herein described from the land formerly belonging to George J. Barlow, and now owned by M. H. Delk, running thence in a Southerly direction along the said boundary line of the said land now owned by M. H. Delk, to the land now owned by W. B. Jones, running thence along the boundary line of the land of W. B. Jones and the lands herein described to a marked pine tree, a corner on the land of W.B. Jones and the land formerly belonging to W. H. Little; running thence in a Northerly direction, and in a straight line to a marked pine tree, a corner on the said county road leading from Mill Swamp Church to Burwell's Bay and at a point opposite a ditch at a corner of the field lying South of the dwelling house; running thence in a Northeasterly direction down the said Burwells Bay Road to a red oak the point of beginning."

LESS, SAVE AND EXCEPT:

1. Land conveyed to the Commonwealth of Virginia for Route 626 by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 127 at page 593.

2. 2.63 acres identified as TM 10-01-024A and conveyed to Milton M. James and Elizabeth H. James, husband and wife, by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 208 at page 502.

3. 8.2863 acres identified as TM 10-01-024B and conveyed to Ronald B. Boyers and Tanya H. Boyers, husband and wife, by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 348 at page 285.

The above described parcel is subject to a boundary line agreement dated April 1, 2013 by and between Michael A. Seward and Emily B. Seward, husband and wife, Grantor and Grantee, and Marie S. Delk, a widow and not remarried, Grantor and Grantee, recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia as Instrument #130002518.

The above described parcel is further subject to a deed of easement by and between Dan G. Delk, married, Grantor, and J. B. Whitmore and Betty W. Clark, Grantees, recorded in the aforesaid Clerk's Office as Instrument #970000574.

It being a part of the same property conveyed to T. H. Delk by deed from George F. Whitley, Special Commissioner dated July 3, 1920 and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 91 at page 239.

T. H. Delk (a/k/a Thomas H. Delk, Sr.) died testate on February 20, 1952 and by the terms of his Will recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Will Book 36 at page 79, he devised a life estate in his real property acquired in Deed Book 91 at page 239 to his wife, Mamie J. Delk. Upon her death, he directed that said property pass to his son, Thomas H. Delk, Jr. upon the condition that he pay the sum of $2,000.00 in cash to his son, Robert J. Delk. A list of heirs for Thomas H. Delk, Sr. is recorded in the aforesaid Clerk's Office in Deed Book 137 at page 442.

Mamie J. Delk died testate on July 13, 1956. Her Will is recorded in the aforesaid Clerk's Office in Will Book 36 at page 255.

Thomas H. Delk, Jr. died testate on August 12, 1966 and by the terms of his Will recorded in the aforesaid Clerk's Office in Will Book 37 at 326, he devised a life estate in his real property to his brother, Robert J. Delk. Upon

his death, he directed that said property pass to his nephew, Dan G. Delk, upon the condition that he pay $2,500.000 to his niece, Nancy Delk Hall, within twelve months after the date of the death of Robert J. Delk.

Robert J. Delk died on May 29, 1971. His Will was recorded in the aforesaid Clerk's Office in Will Book 38 at page 81, evidence of payment to Nancy Delk Hall was recorded in Will Book 38 at page 103, and an Affidavit was recorded in Deed Book 208 at page 370.

Dan G. Delk died testate on February 23, 2011 and by the terms of his Will, a copy of which is recorded in the aforesaid Clerk's Office as Instrument No. 110000079 (CWF 11-79), he devised his real property to his wife, Marie S. Delk.

PARCEL THREE – TAX ID #10-01-030

"All that certain piece or parcel of land situate, lying and being in Hardy Magisterial District, of the County of Isle of Wight, State of Virginia, bounded and described as follows: Beginning at a Red Oak on the East side of the County Road leading from Mill Swamp Church to Burwell's Bay at a point opposite the center of a ditch running partly across a field on the West side of the said Burwell's Bay Road and lying South of the dwelling house, the said ditch being about the center of the said field, the said Red Oak being a corner on the said County Road, and the land allotted to Sallie P. Ward; running thence in an Easterly direction and parallel with the County Road leading from Mill Swamp Church and Burwell's Bay County Road to Smithfield, Virginia, to the boundary line dividing the lands herein described from the lands formerly belonging to the estate of Geo. J. Barlow, and now owned by M. H. Delk; running thence in a northerly direction and along the lands of the said M. H. Delk to the County Road leading to Smithfield; running thence across the said Road to a Gum Stump leading to Smithfield, and the lands belonging to the Shaw Land and Timber Company; running thence in a Northeasterly direction along the lands of the said Shaw Land and Timber Company to an iron post, a corner on the lands of the said Shaw Land and Timber Company; running thence in a Westerly direction along the lands of the said Shaw Land and Timber Company and the lands of W. H. Gale to the County Road leading from Mill Swamp Church to Burwell's Bay; running thence in a Southerly direction to said Mill Swamp Church to Burwell's Bay Road to a Red Oak, point of beginning."

LESS, SAVE AND EXCEPT:

Land conveyed to the Commonwealth of Virginia for Route 626 by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 127 at page 593.

The above described parcel is subject to a boundary line agreement dated June 13, 1989 by and between Dan G. Delk and Marie S. Delk, his wife, and Craig W. Huber and Bonnie G. Huber, and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 356 at page 748.

The above described parcel is further subject to a drainage easement to the Commonwealth of Virginia recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 213 at page 140.

It being a part of the same property conveyed to T. H. Delk by deed from John R. Ward and Mary J. Ward, his wife, dated September 5, 1918 and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 87 at page 648.

T. H. Delk (a/k/a Thomas H. Delk, Sr.) died testate on February 20, 1952 and by the terms of his Will recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Will Book 36 at page 79, he devised a life estate in his real property acquired in Deed Book 87 at page 648 to his wife, Mamie J. Delk. Upon her death, he directed that said property pass to his son, Alfred M. Delk, upon the condition that he pay the sum of $3,000.00 to his son, Robert J. Delk.

Mamie J. Delk died testate on July 13, 1956. Her Will is recorded in the aforesaid Clerk's Office in Will Book 36 at page 255.

There is no proof of record whether or not Alfred M. Delk paid Robert J. Delk the money required to inherit the property from his father. Robert J. Delk died on May 29, 1971 and his Will is recorded in the aforesaid Clerk's Office in Will Book 38 at page 81.

Alfred M. Delk died on February 13, 1959 and according to information given in the derivation clause for a deed recorded in Deed Book 172 at page 254, he left the following individuals as his sole heirs: Gladys G. Delk, his wife, and Dan G. Delk and Nancy Delk Hall, his two children.

Nancy Delk Hall and her husband, Earl T. Hall, conveyed their one-half interest in the property described in Deed Book 87 at page 648 that she acquired by intestate succession from her father, Dan G. Delk, subject to the dower interest of Gladys G. Delk.

Gladys G. Delk remarried on July 25, 1970 to Joseph John Seward, Jr. Gladys G. Delk Seward died on November 18, 1993.

Dan G. Delk died testate on February 23, 2011 and by the terms of his Will, a copy of which is recorded in the aforesaid Clerk's Office as Instrument No. 110000079 (CWF 11-79), he devised his real property to his wife, Marie S. Delk.

Beaverdam Air Park Estates, LLC, a Virginia limited liability company Surry APNs 61-2-2, 61-2-3, 61-2-4, 61-2-5, and 61-5

All that portion of that certain parcel of land lying within Isle of Wight County described particularly as following:

All that certain tract or parcel of land in Cobham Magisterial District, Surry County, Virginia, and in Hardy Magisterial District, Isle of Wight County, Virginia, containing 342.75 acres, bounded and described in accordance with a plat entitled "PLAT SHOWING PROPERTY OF JACK M. GALE SURRY AND ISLE OF WIGHT COUNTIES", made March 1947, by Roy Brinkley, which plat is recorded in the Clerk's Office of the Circuit Court of Surry County in Plat Book 5, at page 7.

LESS, SAVE AND EXCEPT 14.89 acres, being that portion of land annexed into Surry County Tax Parcel 61-5 by virtue of a plat by Robert H. Crowder, P.L.S., dated October 2, 2009, recorded on October 29, 2009, in Map Book 7, at Page 262 (Instrument No. 090032082) in the Clerk's Office of Surry County ('"Airstrip");

LESS, SAVE AND EXCEPT All those certain two lots, pieces or parcels of land situate, lying and being in Cobham District, Surry County, State of Virginia, shown and designated as 3.00 +/- acres Parcel l and 3.00 +/- acres Parcel II respectively on that certain plat of survey entitled "PLAT SHOWING BOUNDARY LINE ADJUSTMENT ON TAX PARCEL #53-4 situated in Cobham District, Surry County, Virginia, Surveyed for CHARLES A NUCKLES, JR. Scale: 1" - 300' Date: October 27, 2008, made by Robert H. Crowder, Inc., Land Surveyor, P. 0. Box 850, Prince George, Virginia 23875", of record in the Clerk's Office of the Circuit Court of Surry County in Plat Book 7, at Page 218, which reference to said plat is hereby made for a more accurate description. Being the same land conveyed in that certain Special Warranty Deed dated January 21, 2009, by and between John Hancock Life Insurance Company, as grantor, and Charles A. Nuckles, Jr., as grantee, and recorded at Book 231, at Page 598 (Instrument No. 090031147).

LESS, SAVE AND EXCEPT that portion of a parcel of land comprising 96.7 acres, and access thereto, conveyed by E. Baxter Seward to Charles A. Nuckles, Jr. by deed dated May 27, 1999,

and recorded in the Clerk's Office of the Circuit Court of Surry County in Deed Book 155, at Page 885, but not including the Airstrip; being intended to except 87.81 acres, more or less;

LESS, SAVE AND EXCEPT 3.53 Acres (Lot 1) conveyed by Beaverdam Airpark Estates, L.L.C., a Virginia limited liability company, as grantor, to Philip F. Olah, as grantee by deed dated August 10, 2012, and recorded September 13, 2012, in the Clerk's Office of the Circuit Court of Surry County in Deed Book 252, at Page 341.

The land described herein being intended to describe Surry County, VA, Assessor's Parcel Nos. 61-2-2, 61-2-3, 61-2-4, 61-2-5, and a portion of 61-5 (excluding the Airstrip) and stated to contain a total of 260.94 acres, more or less.

John Hancock Mutual Life Insurance Company, a Massachusetts corporation, APN 61-4 and a part of 53-6.

All that portion of that certain parcel of land lying within Isle of Wight County described particularly as follows:

Surveyed Description:

ALL THOSE CERTAIN PIECES OR PARCELS OF LAND SITUATE AND BEING PARTLY IN THE COBHAM DISTRICT, SURRY COUNTY, VIRGINIA, AND PARTLY IN THE HARDY DISTRICT, ISLE OF WIGHT COUNTY, VIRGINIA, CONTAINING 1292± ACRES, KNOWN AND DESIGNATED AS ALL OF TAX PARCEL PIN: 61-4 (SURRY COUNTY) AND A PORTION OF TAX PARCEL PIN: 53-6 (SURRY COUNTY) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL 1

BEGINNING AT A PIPE FOUND ALONG THE EASTERN RIGHT OF WAY LINE OF BEECHLAND ROAD – STATE ROUTE 626, LOCATED APPROXIMATELY 1.05 MILES WEST ALONG SAID RIGHT OF WAY FROM ITS INTERSECTION WITH BURRELLS BAY ROAD – ROUTE 621; THENCE CONTINUING ALONG THE EASTERN RIGHT OF WAY LINE OF THE SAID BEECHLAND ROAD – STATE ROUTE 626, N49°12’36”W FOR A DISTANCE OF 2298.90 FEET TO A POINT; THENCE N47°51’18”W FOR A DISTANCE OF 263.86 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 2884.80 FEET FOR AN ARC DISTANCE OF 234.96 FEET, WITH A DELTA OF 4°40’00” AND HAVING A CHORD BEARING N50°11’18”W FOR A CHORD DISTANCE OF 234.90 FEET TO A POINT; THENCE N52°31’18”W FOR A DISTANCE OF 240.90 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 798.51 FEET FOR AN ARC DISTANCE OF 150.98 FEET, WITH A DELTA OF 10°50’00” AND HAVING A CHORD BEARING N47°06’18”W FOR A CHORD DISTANCE OF 150.76 FEET TO A POINT; THENCE N41°41’18”W FOR A DISTANCE OF 521.50 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 838.51 FEET FOR AN ARC DISTANCE OF 184.64 FEET, WITH A DELTA OF 12°37’00” AND A CHORD BEARING N47°59’48”W FOR A CHORD DISTANCE OF 184.27 FEET TO A POINT; THENCE N54°18’18”W FOR A DISTANCE OF 774.50 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 838.51 FEET FOR AN ARC DISTANCE OF 449.53 FEET, WITH A DELTA OF 30°43’00” AND A CHORD BEARING N69°39’48”W FOR A CHORD DISTANCE OF 444.17 FEET TO A POINT; THENCE

N85°01’18”W FOR A DISTANCE OF 180.30 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 798.51 FEET FOR AN ARC DISTANCE OF 634.12 FEET, WITH A DELTA OF 45°30’00” AND A CHORD BEARING N62°16’18”W FOR A CHORD DISTANCE OF 617.59 FEET TO A POINT; THENCE N39°31’18”W FOR A DISTANCE OF 1393.72 FEET TO A ROD SET NEXT TO A 8” MAPLE TREE; THENCE LEAVING THE EAST RIGHT OF WAY LINE OF THE SAID BEECHLAND ROAD – STATE ROUTE 626, N46°45’10”E FOR A DISTANCE OF 305.83 FEET TO A POINT; THENCE N47°58’23”E FOR A DISTANCE OF 202.96 FEET TO A PIPE FOUND; THENCE N44°28’45”E FOR A DISTANCE OF 143.93 FEET TO A PIPE FOUND NEXT TO A 42” MAPLE TREE; THENCE N74°35’37”E FOR A DISTANCE OF 475.60 FEET TO A PIPE FOUND; THENCE N66°01’49”E FOR A DISTANCE OF 176.23 FEET TO A PIPE FOUND; THENCE N67°26’46”E FOR A DISTANCE OF 238.56 FEET TO A PIPE FOUND; THENCE N67°29’25”E FOR A DISTANCE OF 269.22 FEET TO A PIPE FOUND NEXT TO A 18” GUM TREE; THENCE N66°29’06”E FOR A DISTANCE OF 281.15 FEET TO A PIPE FOUND; THENCE N67°12’11”E FOR A DISTANCE OF 289.87 FEET TO A PIPE FOUND; THENCE N66°10’16”E FOR A DISTANCE OF 229.63 FEET TO A PIPE FOUND NEXT TO A 24” PINE SNAG; THENCE N67°44’36”E FOR A DISTANCE OF 219.83 FEET TO A PIPE FOUND; THENCE N66°10’44”E FOR A DISTANCE OF 200.26 FEET TO AN IRON ROD FOUND NEXT TO AN OAK STUMP; THENCE N69°12’37”E FOR A DISTANCE OF 296.40 FEET TO A PIPE FOUND; THENCE N68°19’29”E FOR A DISTANCE OF 893.41 FEET TO A POINT; THENCE N25°55’26”W FOR A DISTANCE OF 258.67 FEET TO A POINT; THENCE N28°54’56”W FOR A DISTANCE OF 482.29 FEET TO A POINT; THENCE N27°13’34”W FOR A DISTANCE OF 1284.14 FEET TO A PIPE FOUND ALONG THE EASTERN RIGHT-OF-WAY OF WHITE MARSH ROAD – STATE ROUTE 617; THENCE CONTINUING ALONG THE SAID WHITE MARSH ROAD – STATE ROUTE 617, N70°15’43”E FOR A DISTANCE OF 73.33 FEET TO A POINT; THENCE N29°49’15”E FOR A DISTANCE OF 147.94 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 1934.86 FEET FOR AN ARC DISTANCE OF 416.25 FEET, WITH A DELTA OF 12°19’34” AND A CHORD BEARING N45°00’18”E FOR A CHORD DISTANCE OF 415.44 FEET TO A POINT; THENCE N38°50’31”E FOR A DISTANCE OF 1287.22 FEET TO A POINT IN THE CENTER OF AN OLD ROAD BED; THENCE LEAVING THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND CONTINUING ALONG THE CENTER OF THE SAID OLD ROAD BED, N68°45’17”E FOR A DISTANCE OF 215.03 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 175.00 FEET FOR AN ARC DISTANCE OF 115.29 FEET, WITH A DELTA OF 37°44’52” AND A CHORD BEARING N49°52’50”E FOR A CHORD DISTANCE OF 113.22 FEET TO A POINT; THENCE N31°00’24”E FOR A DISTANCE OF 75.24 FEET TO A POINT; THENCE N 16°49’43”E FOR A DISTANCE OF 180.32 FEET TO A POINT; THENCE LEAVING THE SAID OLD ROAD BED, S66°21’28”E FOR A DISTANCE OF 69.17 FEET TO A POINT ALONG THE CENTER OF A CREEK; THENCE CONTINUING ALONG THE CENTER OF SAID CREEK AS IT MEANDERS FOR A TOTAL DISTANCE OF APPROXIMATELY 8650 FEET TO A POINT AND HAVING THE FOLLOWING ELEVEN TIE LINE BEARINGS AND DISTANCES: S42°38’56”E FOR A DISTANCE OF 717.83 FEET TO A POINT; THENCE S35°06’35”E FOR A DISTANCE OF 611.86 FEET TO A POINT; THENCE S84°46’39”E FOR A DISTANCE OF 820.41 FEET TO A POINT; THENCE N67°32’06”E FOR A DISTANCE OF 380.74 FEET TO A POINT; THENCE N8°48’48”E FOR A DISTANCE OF 1001.61 FEET TO A POINT; THENCE N44°12’18”E FOR A DISTANCE OF 1027.49 FEET TO A POINT; THENCE N7°45’28”W FOR A DISTANCE OF 903.08 FEET TO A POINT; THENCE N34°46’56”E FOR A DISTANCE OF 914.52 FEET TO A POINT; THENCE N1°36’55”E FOR A DISTANCE OF 851.45 FEET TO A POINT; THENCE N3°14’40”E FOR A DISTANCE OF

822.99 FEET TO A POINT; THENCE S88°37’13”W FOR A DISTANCE OF 494.94 TO A POINT IN THE CENTER OF SAID CREEK; THENCE LEAVING THE CENTER OF THE SAID CREEK AND FOLLOWING ALONG THE CENTER OF A DITCH WHICH PASSES THROUGH A 24” PINE N72°47’28”W FOR A DISTANCE OF 924.13 FEET TO A POINT ALONG THE EASTERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617; THENCE LEAVING THE CENTER OF THE SAID DITCH AND CONTINUING ALONG THE EASTERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617, N25°19’13”E FOR A DISTANCE OF 1371.30 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 2675.54 FEET FOR AN ARC DISTANCE OF 500.08 FEET, WITH A DELTA OF 10°42’32” AND A CHORD BEARING N30°51’22”E FOR A CHORD DISTANCE OF 499.35 FEET TO A POINT; THENCE N34°33’24”E FOR A DISTANCE OF 125.94 FEET TO A POINT ALONG THE CENTER OF AN OLD ROAD BED; THENCE LEAVING THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND CONTINUING ALONG THE CENTER OF THE SAID OLD ROAD BED, N68°04’20”E FOR A DISTANCE OF 54.03 FEET TO A POINT; THENCE N23°21’34”E FOR A DISTANCE OF 232.64 FEET TO A POINT ALONG THE EASTERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617; THENCE LEAVING THE SAID OLD ROAD BED AND CONTINUING WITH EASTERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617 ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 2785.00 FEET FOR AN ARC DISTANCE OF 205.37 FEET, WITH A DELTA OF 4°13’30” AND A CHORD BEARING N25°42’18”E FOR A CHORD DISTANCE OF 205.32 FEET TO A POINT; THENCE N23°35’33”E FOR A DISTANCE OF 152.90 FEET TO A POINT ALONG THE INTERSECTION OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND AN OLD ROAD BED; THENCE LEAVING THE RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND CONTINUING ALONG THE CENTER OF THE SAID OLD ROAD BED, S81°32’57”E FOR A DISTANCE OF 83.02 FEET TO A POINT; THENCE S78°49’15”E FOR A DISTANCE OF 89.34 FEET TO A POINT; THENCE S81°33’43”E FOR A DISTANCE OF 50.77 FEET TO A POINT; THENCE S 78°27’35”E FOR A DISTANCE OF 192.30 FEET TO A POINT; THENCE S79°58’48”E FOR A DISTANCE OF 127.36 FEET TO A POINT; THENCE S79°17’36”E FOR A DISTANCE OF 291.10 FEET TO A POINT; THENCE S79°18’02”E FOR A DISTANCE OF 159.59 FEET TO A POINT; THENCE S79°02’57”E FOR A DISTANCE OF 334.27 FEET TO A POINT; THENCE S81°40’51”E FOR A DISTANCE OF 121.78 FEET TO A POINT; THENCE S63°06’04”E FOR A DISTANCE OF 58.35 FEET TO A POINT; THENCE S78°23’36”E FOR A DISTANCE OF 137.78 FEET TO A POINT; THENCE S81°04’50”E FOR A DISTANCE OF 307.64 FEET TO A POINT; THENCE LEAVING THE CENTER OF THE SAID OLD ROAD BED, S32°12’22”W FOR A DISTANCE OF 1491.85 FEET TO A POINT; THENCE S55°46’37”E FOR A DISTANCE OF 185.27 FEET TO A POINT; THENCE S7°41’52”W FOR A DISTANCE OF 602.20 FEET TO A POINT; THENCE S8°00’38”W FOR A DISTANCE OF 1041.14 FEET TO A POINT; THENCE S 81°01’17”E FOR A DISTANCE OF 1331.29 FEET TO A POINT; THENCE S9°02’57”W FOR A DISTANCE OF 3283.47 FEET TO A POINT; THENCE S7°39’14”E FOR A DISTANCE OF 37.01 FEET TO A POINT; THENCE S47°12’17”E FOR A DISTANCE OF 199.67 FEET TO A POINT; THENCE S25°22’48”W FOR A DISTANCE OF 1720.44 FEET TO A POINT; THENCE S21°45’13”W FOR A DISTANCE OF 141.82 FEET TO A POINT; THENCE S16°59’45”W FOR A DISTANCE OF 259.85 FEET TO A POINT; THENCE N46°02’17”W FOR A DISTANCE OF 115.11 FEET TO A POINT; THENCE N56°03’58”W FOR A DISTANCE OF 120.17 FEET TO A POINT; THENCE N61°41’56”W FOR A DISTANCE OF 197.62 FEET TO A POINT; THENCE N65°59’34”W FOR A DISTANCE OF 119.20 FEET TO A POINT IN THE CENTER OF A SWAMP; THENCE ALONG THE CENTER OF THE SAID SWAMP AS IT MEANDERS FOR A

TOTAL DISTANCE OF APPROXIMATELY 3090 FEET AND HAVING THE FOLLOWING NINE TIE LINE BEARINGS AND DISTANCES: S24°46’47”W FOR A DISTANCE OF 269.76 FEET TO A POINT; THENCE S49°15’04”W FOR A DISTANCE OF 874.15 FEET TO A POINT; THENCE S1°13’11”W FOR A DISTANCE OF 416.69 FEET TO A POINT; THENCE S56°19’51”W FOR A DISTANCE OF 255.81 FEET TO A POINT; THENCE S19°09’24”E FOR A DISTANCE OF 283.84 FEET TO A POINT; THENCE N71°31’11”E FOR A DISTANCE OF 252.68 FEET TO A POINT; THENCE S30°36’47”E FOR A DISTANCE OF 568.87 FEET TO A POINT; THENCE S76°14’22”E FOR A DISTANCE OF 200.64 FEET TO A POINT; THENCE S41°44’22”W FOR A DISTANCE OF 137.07 FEET TO A POINT; THENCE LEAVING THE CENTER OF THE SAID SWAMP, S83°23’54”W FOR A DISTANCE OF 734.24 FEET TO A 36 INCH WHITE OAK; THENCE S80°19’15”W FOR A DISTANCE OF 620.35 FEET TO A 36 INCH GUM; THENCE S79°49’52”W FOR A DISTANCE OF 462.57 FEET TO A TWIN 42 INCH PINE; THENCE S82°49’04”W FOR A DISTANCE OF 426.36 FEET TO A POINT; THENCE S85°06’40”W FOR A DISTANCE OF 470.15 FEET TO A POINT; THENCE N85°14’45”W FOR A DISTANCE OF 163.86 FEET TO A POINT; THENCE S19°12’00”W FOR A DISTANCE OF 93.09 FEET TO A POINT; THENCE S2°04’55”W FOR A DISTANCE OF 77.10 FEET TO A POINT; THENCE S4°28’25”W FOR A DISTANCE OF 133.02 FEET TO A POINT; THENCE S19°13’32”W FOR A DISTANCE OF 166.01 FEET TO A POINT; S87°05’09”W FOR A DISTANCE OF 921.78 FEET TO A POINT; THENCE S2°54’51”E FOR A DISTANCE OF 150.00 FEET TO A POINT; THENCE N87°05’09”E FOR A DISTANCE OF 848.03 FEET TO A POINT IN THE CENTER OF A SWAMP; THENCE ALONG THE CENTER OF THE SAID SWAMP FOR A TOTAL DISTANCE OF APPROXIMATELY 755 FEET TO A PIPE FOUND AND HAVING THE FOLLOWING FIVE TIE LINE BEARINGS AND DISTANCES: S15°51’20”W FOR A DISTANCE OF 264.56 FEET TO A POINT; THENCE S20°25’45”E FOR A DISTANCE OF 66.95 FEET TO A POINT; THENCE S24°56’46”W FOR A DISTANCE OF 114.24 FEET TO A POINT; THENCE S42°50’52”W FOR A DISTANCE OF 163.18 FEET TO A POINT; THENCE S4°45’42”W FOR A DISTANCE OF 90.97 FEET TO THE SAID PIPE FOUND; THENCE LEAVING THE CENTER OF THE SAID SWAMP S28°04’20”E FOR A DISTANCE OF 212.58 FEET TO A PIPE FOUND; THENCE S27°02’27”E FOR A DISTANCE OF 130.00 FEET TO A PIPE FOUND; THENCE S27°02’27”E FOR A DISTANCE OF 177.16 FEET TO A POINT; THENCE S43°02’27”E FOR A DISTANCE OF 129.39 FEET TO A POINT; THENCE S53°44’08”E FOR A DISTANCE OF 118.27 FEET TO A POINT; THENCE S54°04’34”E FOR A DISTANCE OF 134.19 FEET TO A POINT; THENCE S27°53’46”W FOR A DISTANCE OF 131.22 FEET TO A POINT IN THE CENTER OF A SWAMP; THENCE ALONG THE CENTER OF SAID SWAMP AS IT MEANDERS FOR A TOTAL DISTANCE OF APPROXIMATELY 535 FEET TO A PIPE FOUND IN THE CENTER OF THE SAID SWAMP AND HAVING THE FOLLOWING THREE TIE LINE BEARINGS AND DISTANCES: S1°47’33”W FOR A DISTANCE OF 131.58 FEET TO A PIPE FOUND; THENCE S2°06’19”E FOR A DISTANCE OF 235.06 FEET TO A POINT; THENCE S27°09’08”E FOR A DISTANCE OF 215.84 FEET TO THE SAID PIPE FOUND IN THE CENTER OF SWAMP; THENCE LEAVING THE CENTER OF THE SAID SWAMP, S0°46’58”E FOR A DISTANCE OF 223.66 FEET TO A PIPE FOUND; THENCE S0°59’08”E FOR A DISTANCE OF 194.99 FEET TO A POINT; THENCE S10°16’09”E FOR A DISTANCE OF 198.00 FEET TO A PIPE FOUND; THENCE S10°46’09”E FOR A DISTANCE OF 342.00 FEET TO A POINT; THENCE S12°46’09”E FOR A DISTANCE OF 174.00 FEET TO A PIPE FOUND; THENCE S15°46’09”E FOR A DISTANCE OF 371.00 FEET TO A POINT; THENCE S4°46’09”E FOR A DISTANCE OF 411.00 FEET TO A POINT; THENCE S5°16’09”E FOR DISTANCE OF 219.00 FEET TO A POINT; THENCE S0°07’48”W FOR A DISTANCE OF 252.11 FEET TO A PIPE FOUND; THENCE S2°08’39”E FOR A DISTANCE OF 115.12 FEET TO A PIPE FOUND THENCE S

3°23’16”E FOR A DISTANCE OF 174.31 FEET TO A POINT; THENCE S49°54’42”W FOR A DISTANCE OF 275.85 FEET TO A PIPE FOUND ALONG THE EASTERN RIGHT-OF-WAY OF THE SAID BEECHLAND ROAD – STATE ROUTE 626, SAID PIPE FOUND BEING THE POINT OF BEGINNING, CONTAINING APPROXIMATELY 1167 ACRES, MORE OR LESS.

PARCEL 2

BEGINNING AT A POINT IN THE INTERSECTION OF THE CENTER OF AN OLD ROAD BED AND THE NORTHERN RIGHT OF WAY LINE OF WHITE MARSH ROAD – STATE ROUTE 617, SAID POINT BEING LOCATED APPROXIMATELY 2.5 MILES EAST OF THE INTERSECTION OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND BEECHLAND ROAD – STATE ROUTE 626; THENCE LEAVING THE NORTHERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND CONTINUING ALONG THE CENTER OF THE OLD ROAD BED N14°34’20”E FOR A DISTANCE OF 311.95 FEET TO A POINT; THENCE N29°04’20”E FOR A DISTANCE OF 100.00 FEET TO A POINT; THENCE N68°04’20”E FOR A DISTANCE OF 165.64 FEET TO A POINT ALONG THE NORTHERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617; THENCE LEAVING THE CENTER OF THE SAID OLD ROAD BED AND CONTINUING ALONG THE NORTHERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617, S34°33’24”W FOR A DISTANCE OF 80.21 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 2705.54 FEET FOR AN ARC DISTANCE OF 451.80 FEET, WITH A DELTA OF 9°34’04” AND A CHORD BEARING S31°25’03”W FOR A CHORD DISTANCE OF 451.27 FEET TO A POINT, SAID POINT BEING THE POINT OF BEGINNING, CONTAINING 0.598 ACRES, MORE OR LESS.

PARCEL 3

BEGINNING AT A POINT IN THE INTERSECTION OF THE CENTER OF AN OLD ROAD BED AND THE NORTHERN RIGHT OF WAY LINE OF WHITE MARSH ROAD – STATE ROUTE 617, SAID POINT BEING LOCATED APPROXIMATELY 0.92 MILES EAST OF THE INTERSECTION OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND BEECHLAND ROAD – STATE ROUTE 626; THENCE LEAVING THE NORTHERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617 AND CONTINUING ALONG THE CENTER OF THE OLD ROAD BED, N30°17’09”E FOR A DISTANCE OF 200.32 FEET TO A POINT; THENCE N20°56’53”E FOR A DISTANCE OF 195.81 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 715.00 FEET FOR AN ARC DISTANCE OF 347.70 FEET, WITH A DELTA OF 27°51’45” AND A CHORD BEARING N34°52’45”E FOR A CHORD DISTANCE OF 344.28 FEET TO A POINT; THENCE N48°48’38”E FOR A DISTANCE OF 651.33 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 230.000 FEET FOR AN ARC DISTANCE OF 63.52 FEET, WITH A DELTA OF 15°49’28” AND A CHORD BEARING N56°43’22”E FOR A CHORD DISTANCE OF 63.32 FEET TO A POINT ALONG THE NORTHERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617; THENCE LEAVING THE CENTER OF THE SAID OLD ROAD BED AND CONTINUING ALONG THE NORTHERN RIGHT-OF-WAY OF THE SAID WHITE MARSH ROAD – STATE ROUTE 617, S38°50’31”W FOR A DISTANCE OF 1166.70 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 1884.86 FEET FOR AN ARC DISTANCE OF 263.81 FEET, WITH A DELTA OF 8°01’09”

AND A CHORD BEARING S42°51’06”W FOR A CHORD DISTANCE OF 263.59 FEET TO A POINT, SAID POINT BEING THE POINT OF BEGINNING, CONTAINING 2.641 ACRES, MORE OR LESS.

PARCEL 4

COMMENCING AT A PIPE FOUND ALONG THE EASTERN RIGHT OF WAY LINE OF BEECHLAND ROAD – STATE ROUTE 626, LOCATED APPROXIMATELY 1.05 MILES WEST ALONG SAID RIGHT OF WAY FROM ITS INTERSECTION WITH BURRELLS BAY ROAD – ROUTE 621, SAID PIPE BEING THE SOUTH EAST CORNER OF THE PROPERTY IN THE NAME OF JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY AND BEING DESIGNATED AS TAX MAP PARCEL 61-4; THENCE ALONG A TIE LINE N49°42’55”E FOR A DISTANCE OF 4385.52 FEET TO A POINT, SAID POINT BEING THE TRUE POINT AND PLACE OF BEGINNING; THENCE N33°45’29”W FOR A DISTANCE OF 271.00 FEET TO A POINT; THENCE N42°15’29”W FOR A DISTANCE OF 221.00 FEET TO A POINT; THENCE N39°15’29”W FOR A DISTANCE OF 49.74 FEET TO A POINT IN THE CENTER OF A DIRT ROAD; THENCE CONTINUING ALONG THE CENTER OF THE SAID DIRT ROAD, N15°07’17”E FOR A DISTANCE OF 1086.61 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 1900.00 FEET FOR AN ARC DISTANCE OF 524.33 FEET, WITH A DELTA OF 15°48’42” AND A CHORD BEARING N7°12’56”E FOR A CHORD DISTANCE OF 522.67 FEET TO A POINT; THENCE N0°15’52”W FOR A DISTANCE OF 706.67 FEET TO A POINT; THENCE N9°42’10”W FOR A DISTANCE OF 79.34 TO A POINT IN THE INTERSECTION OF THE SAID DIRT ROAD AND OF A 12 FOOT DIRT ROAD; THENCE CONTINUING WITH THE 12 FOOT DIRT ROAD ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 110.71 FEET FOR AN ARC DISTANCE OF 72.33 FEET, WITH A DELTA OF 37°25’56” AND A CHORD BEARING S46°27’06”E FOR A CHORD DISTANCE OF 71.05 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 341.02 FEET FOR AN ARC DISTANCE OF 155.39 FEET, WITH A CHORD BEARING S85°47’55”E FOR A CHORD DISTANCE OF 154.05 FEET TO A POINT; THENCE N79°11’47”E FOR DISTANCE OF 1205.33 FEET TO A POINT AT THE INTERSECTION OF TWO 12 FOOT DIRT ROADS; THENCE CONTINUING ALONG THE CENTER OF THE SAID 12 FOOT DIRT ROAD S42°52’38”E FOR A DISTANCE OF 982.19 FEET TO A POINT; THENCE S41°29’14”E FOR A DISTANCE OF 1171.06 FEET TO A POINT AT THE INTERSECTION OF TWO 12 FOOT DIRT ROADS; THENCE CONTINUING ALONG THE CENTER OF THE SAID 12 FOOT DIRT ROAD S65°41’48”W FOR A DISTANCE OF 2774.57 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 598.63 FEET FOR AN ARC DISTANCE OF 131.89 FEET, WITH A DELTA OF 12°37’25” AND A CHORD BEARING S56°18’35”W FOR A CHORD DISTANCE OF 131.63 FEET TO A POINT; THENCE S49°59’53”W FOR A DISTANCE OF 139.73 FEET TO A POINT; THENCE S64°02’04”W FOR A DISTANCE OF 99.80 FEET TO A POINT, SAID POINT BEING THE TRUE POINT AND PLACE OF BEGINNING, CONTAINING 121.409 ACRES, MORE OR LESS.

Jeanette N. Byrum, Richard L. Byrum, and Janice F. Byrum, APN 60-9

All that portion of that certain parcel of land lying within Isle of Wight County described particularly as follows:

All of those three (3) contiguous tracts, pieces or parcels of land together having an aggregate acreage of 473 acres, more or less, conveyance in gross and not by the acre, situate, lying and being in the County of Surry, State of Virginia, and generally known and described as the real estate of which William P. Gwaltney died seized and possessed, which lies on both sides of the secondary road, Route 623, leading from Mill Swamp Church to Runnymede, and which as one tract or parcel of land is generally described as being bounded on the North by the Thomas and Simmons lands, on the East by the Gwaltney mill pond, and on the south by the lands formerly belonging to Oscar Drew and the lands of Ernest Wells and on the West by the lands of Ernest Lane. It being the same real estate of which the late William P. Gwaltney died seized and possessed and which by his last will and testament bearing date the 11th., day of September, 1906, and duly probated and recorded in the Clerk's Office of the County of Surry, State of Virginia, on May 18, 1917, in Will Book 14, at page 272, he devised to his wife, Leonetta Madeline Gwaltney for and during her natural life, and who is now deceased, and at her death to be divided equally between his children there in named, namely, Ann Snow, Stanley L., Mary L., Madge H., and Taylor W., and the children of his late son, W. Ashton, the said Stanley L. Gwaltney having acquired the fee simple title to all of said real estate by virtue of the will aforesaid of his late father, a certain deed from Taylor W. Gwaltney, et ux., dated December 12, 1922, and of record in the last mentioned Clerk's Office in Deed Book 37, at page 746, and by another certain deed dated March 30,1944, and of record in the last mentioned Clerk's Office in Deed Book 46, at page 328, from Ann Gwaltney Ramsey, nee Ann Snow Gwaltney, et als.

Jeffrey Seward and Melanie Seward, APN 60-1-1

All that portion of that certain parcel of land lying within Isle of Wight County described particularly as following:

"All that certain lot, piece, or parcel of land situate, lying and being in Isle of Wight County and Surry County, Virginia and containing 256.67 acres as shown on a plat of survey entitled 'PLAT SHOWING PROPERTY OF J. R. BUHLS AND IRENE BUHLS HARDY MAGISTERIAL DISTRICT ISLE OF WIGHT COUNTY, VIRGINIA BLACKWATER MAGIS. DISTRICT SURRY COUNTY, VIRGINIA SCALE 1" = 300' NOV. 28, 1969 SURVEY BY J. E. HENRY C.L.S. TOTAL AREA = 258.71 ACRES' and plat is recorded in the Clerk's Office of the Circuit Court for Isle of Wight County, Virginia in Plat Book 5, page 158, reference being made to the plat of survey for a more complete description of the real estate hereby conveyed."

LESS, SAVE and EXCEPT, 3. 915 acres conveyed to Vincent A. Beale by deed dated February 15, 1994, and recorded in the Clerk's Office aforesaid in Deed Book 431, page 341.

BEING in all respects the same property as that conveyed unto Jeffrey A. Seward by deed dated May 1, 2006 from Seward Farms Partnership, a Virginia general partnership and recorded in the Clerk's Office of the Circuit Court of Surry County in Deed Book 207, at page 125 and in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia as Instrument Number 060003241.

Exhibit E - Participating Parcels with Consent Affidavits

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Isle of Wight County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Stephen R. Romine, or another representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Isle of Wight County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regarding to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 24th day of September, 2019.

476, L.L.C.

By: HR Ashe
Name: H R ASHE
Title: MANAGER

LAURIE S. STARKEY
COMMONWEALTH OF VIRGINIA
REGISTRATION NO. 7703799
MY COMM. EXPIRES 03/31/2020
NOTARY PUBLIC

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF York, to wit:

I, Laurie S. Starkey, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that H.R. Ashe, Manager of 476, L.L.C., a Virginia (*state of formation*) limited liability company, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid on behalf of the company.

Witness my hand and notorial seal this 24th day of September, 2019

Notary Public

My Commission expires: 3/31/20.

[SEAL]

LAURIE S. STARKEY
COMMONWEALTH OF VIRGINIA
REGISTRATION NO. 7703799
MY COMM. EXPIRES 03/31/2020
NOTARY PUBLIC

EXHIBIT A

Property Description

Parcel ID	Address	County
11-01-005	10045 Mill Swamp Rd., Smithfield, VA	Isle of Wight

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Isle of Wight County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Stephen R. Romine, or another representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Isle of Wight County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regarding to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 25 day of Sept, 2019.

Mitchell D. Batten

Print Name: Mitchell D. Batten, Trustee
of the Jane Delk Batten Revocable Trust

COMMONWEALTH OF VIRGINIA
COUNTY/~~CITY~~ OF Isle of Wight, to wit:

I, Mary R Nelms, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Mitchell D. Batten, Trustee of the Jane Delk Batten Revocable Trust, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 25th day of Sept, 2019

Mary R Nelms
Notary Public

My Commission expires: 1-31-2021.

[SEAL]

MARY REVELS NELMS NOTARY PUBLIC MY COMMISSION NUMBER 150312 COMMONWEALTH OF VIRGINIA

EXHIBIT A

Property Description

Parcel ID	Address	County
11-01-015	Mill Swamp Rd., Smithfield, VA	Isle of Wight

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Surry County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Stephen R. Romine, or another representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Surry County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regarding to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 1 day of Oct, 2019.

BEAVERDAM AIR PARK ESTATES LLC

By: Charles A. Nuckles Jr.
Name: Charles A. Nuckles Jr.
Title: president

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF Isle of Wight to wit:

I, Ashlee Sanderson, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Charles A Nuckles Jr President of Beaverdam Air Park Estates LLC, a Virginia (*state of formation*) limited liability company, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid on behalf of the company.

Witness my hand and notorial seal this 1st day of October, 2019

Notary Public

My Commission expires: 8/31/21. [SEAL]

ASHLEE SANDERSON
NOTARY PUBLIC
REGISTRATION # 7503027
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
8/31/21

EXHIBIT A

Property Description

Parcel ID	Address	County
61-2-2	Beechland Rd., Rushmere, VA	Surry
61-2-3	Beechland Rd., Rushmere, VA	Surry
61-2-4	Beechland Rd., Rushmere, VA	Surry
61-2-5	Beechland Rd., Rushmere, VA	Surry
61-5	Beechland Rd., Rushmere, VA	Surry

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is one of the three sole owners of property located in Surry County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Stephen R. Romine, or another representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Surry County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regard to such approvals. The undersigned represents that she jointly owns the Property with Richard L. Byrum and Janice F. Byrum, who have provided a separate Owner's Authority Letter to sPower that is substantively identical to this Letter.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 29th day of June, 2020.

Jeanette N. Byrum
Print Name: Jeanette N. Byrum

COMMONWEALTH OF VIRGINIA
COUNTY/~~CITY~~ OF Isle of Wight, to wit:

I, JoAnne Faircloth Joyner, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Jeanette N. Byrum, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 29 day of June, 2020

JoAnne Faircloth Joyner
Notary Public

My Commission expires: 7/31/2023.

[SEAL]
JOANNE FAIRCLOTH JOYNER
NOTARY PUBLIC
REG # 337547
COMMISSION EXPIRES 07/31/2023
COMMONWEALTH OF VIRGINIA

Richard L Byrum
Print Name: Richard L. Byrum

COMMONWEALTH OF VIRGINIA
COUNTY/~~CITY~~ OF Isle of Wight to wit:

I, JoAnne Faircloth Joyner, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Richard L. Byrum, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 29 day of June, 2020

JoAnne Faircloth Joyner
Notary Public

My Commission expires: 7/31/2023.

[SEAL]

JOANNE FAIRCLOTH JOYNER NOTARY PUBLIC REG # 337547 COMMISSION EXPIRES 07/31/2023 COMMONWEALTH OF VIRGINIA

Janice F. Byrum
Print Name: Janice F. Byrum

COMMONWEALTH OF VIRGINIA
COUNTY/~~CITY~~ OF Isle of Wight, to wit:

I, JoAnne Faircloth Joyner, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Janice F. Byrum, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 29 day of June, 2020

JoAnne Faircloth Joyner
Notary Public

My Commission expires: 7/31/2023.

[SEAL]

JOANNE FAIRCLOTH JOYNER NOTARY PUBLIC REG # 337547 COMMISSION EXPIRES 07/31/2023 COMMONWEALTH OF VIRGINIA

EXHIBIT A

Property Description

Parcel ID	Address	County
60-9	285 Mill Swamp Rd., Bacons Castle, VA	Surry

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who are the sole owners of property located in Isle of Wight County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), do hereby make, constitute, and appoint a representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Isle of Wight County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regard to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 20th day of August, 2020.

Marie S. Delk
Print Name: Marie S. Delk

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF Norfolk, to wit:

I, Michelle Ivey-Renee Johnson, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Marie S. Delk, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 20th day of August, 2020

Michelle Ivey-Renee John
Notary Public

My Commission expires: 02-29-2024. [SEAL]

MICHELLE IVEY-RENEE JOHNSON
NOTARY PUBLIC
REG # 7679532
MY COMMISSION EXPIRES
2/29/2024
COMMONWEALTH OF VIRGINIA

EXHIBIT A

Property Description

Parcel ID	Address	County
10-01-024	Mill Swamp Rd, Smithfield, VA	Isle of Wight
10-01-030	Mill Swamp Rd, Smithfield, VA	Isle of Wight
10-01-017	Mill Swamp Rd, Smithfield, VA	Isle of Wight

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Surry County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Stephen R. Romine, or another representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Surry County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regarding to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 15th day of July, ~~2019.~~ 2020.

Print Name: Jeffery A. Seward

Print Name: Melanie D. Seward

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF Isle of Wight, to wit:

I, William H. Riddick III, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Jeffery A. Seward + Melanie D. Seward, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 15th day of July, 2019

Notary Public

My Commission expires: 3/31/2021.

[SEAL]

WILLIAM H. RIDDICK, III
NOTARY PUBLIC
MY COMMISSION NUMBER 150494
COMMONWEALTH OF VIRGINIA

EXHIBIT A

Property Description

Parcel ID	Address	County
60-21	White Marsh Road, Rushmere, VA	Surry
61-1	Beechland Rd., Rushmere, VA	Surry
60-1-1	Bellevue Rd., Rushmere, VA	Surry
60-19	Bellevue Rd., Rushmere, VA	Surry
60-19C	Bellevue Rd., Rushmere, VA	Surry
60-19B	Bellevue Rd., Rushmere, VA	Surry

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Isle of Wight County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Stephen R. Romine, or another representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Isle of Wight County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regarding to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 25TH day of SEPTEMBER 2019.

JEAN E. BARCROFT
Print Name: Jean E. Barcroft, Sole Trustee
of the Jean E. Barcroft Living Trust

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF ISLE OF WIGHT, to wit:

I, ROBIN STILTNER, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Jean E. Barcroft, Sole Trustee of the Jean E. Barcroft Living Trust, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 25TH day of SEPTEMBER, 2019

Notary Public

My Commission expires: 12.31.2020.

[SEAL]

ROBIN B. STILTNER NOTARY PUBLIC REG #7227670 COMMONWEALTH OF VIRGINIA

EXHIBIT A

Property Description

Parcel ID	Address	County
10-01-025	Burwells Bay Rd., Smithfield, VA	Isle of Wight

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who are the sole owners of property located in Isle of Wight County, Virginia, and Surry County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), do hereby make, constitute, and appoint Stephen R. Romine, or another representative, agent or contractor of sPower as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Isle of Wight County and Surry County, where applicable, for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regarding to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 24th day of September, 2019.

Michael A. Seward
Print Name: Michael A. Seward

COMMONWEALTH OF VIRGINIA
COUNTY/~~CITY~~ OF Isle of Wight, to wit:

I, Mary R Nelms, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Michael A. Seward, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 24th day of Sept, 2019

Mary R Nelms
Notary Public

My Commission expires: 1-31-2021. [SEAL]

MARY REVELS NELMS NOTARY PUBLIC MY COMMISSION NUMBER 150312 COMMONWEALTH OF VIRGINIA

OWNER'S AUTHORITY LETTER
[Signature page continued]

Emily B. Seward
Print Name: Emily B. Seward

STATE/COMMONWEALTH OF Virginia
COUNTY/~~CITY~~ OF Dale City to wit:

I, Mary R Nelms, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Emily B. Seward, whose name as such is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notorial seal this 24th day of Sept, 2019

Mary R Nelms
Notary Public

My Commission expires: 1-31-2021. [SEAL]

MARY REVELS NELMS NOTARY PUBLIC MY COMMISSION NUMBER 150312 COMMONWEALTH OF VIRGINIA

EXHIBIT A

Property Description

Parcel ID	Address	County
10-01-020	Jones Dr., Smithfield, VA 23420	Isle of Wight
10-01-021	Jones Dr., Smithfield, VA 23430	Isle of Wight
10-01-023	Jones Dr., Smithfield, VA 23430	Isle of Wight
10-01-027	Jones Dr., Smithfield, VA 23430	Isle of Wight
61-3	~~9310 Jones Dr., Smithfield, VA 23430~~ Beechland Rd., Surry, VA 23883	Surry

Exhibit F - Traffic Plan

Cavalier Solar Traffic Plan

September 2, 2020

The following Traffic Plan (TP) is the initial step in ensuring traffic safety for the Cavalier Solar Project. The TP describes various policies for the safe and efficient use of the roads for the duration of construction of the proposed Cavalier Solar Project. The TP will be followed by a road use impact study within the planned haul routes identified by the TP in order to document and refine the transportation plan measures that will be implemented during construction. These measures will address school bus avoidance, delivery procedures, on-site and off-site parking and ridesharing programs, haul route pavement maintenance, temporary traffic control measures, and safety.

sPower and the contractor will work closely with Surry and Isle of Wight Counties and the Virginia Department of Transportation (VDOT) to ensure the safe and efficient movement of local traffic throughout the anticipated 12-month construction period.

School Bus Avoidance

After identifying the construction haul routes that will serve the project, sPower will identify the school bus stops that exist along the roads and various connecting side streets in the vicinity of the project area. sPower will take steps to ensure that students are kept safe and minimal interaction occurs between construction traffic and school bus operations. This will be achieved through a combination of the following strategies:

- Wide-load deliveries will be restricted during the times when school buses are picking up or dropping off students during the school year. sPower will educate drivers on school bus pickup hours and locations.
- Employees will be encouraged to participate in ridesharing programs to reduce commuter traffic to the site (see Parking and Ridesharing).
- Reduced speed limits during the school year near bus stop locations will be a suggested traffic calming measure to VDOT. Speed limits will be communicated via temporary signage along construction traffic routes and through driver education where applicable.
- Potential “high-risk” bus stops will be identified in coordination with County Schools. These locations will be considered for temporary relocation or enhanced safety measures, such as signage to indicate safe waiting areas and warn of heavy truck traffic.

Pavement Maintenance along Haul Routes

Portions of the surrounding public roadways will be designated as haul routes for deliveries during construction. The following procedures will be set in place for the assessment and maintenance of haul route pavements before, during, and after construction.

- Prior to construction, representatives from Surry and Isle of Wight Counties, VDOT, sPower, and the contractor will coordinate to drive the designated haul routes to collect observations and video footage of current pavement conditions. The pre-construction pavement conditions will be documented for future reference.
- At the conclusion of construction, representatives from the counties, VDOT, sPower, and the contractor will coordinate to drive the designated haul routes to collect observations and video footage of current pavement conditions. The post-construction pavement conditions will be documented and compared to pre-construction conditions.
- At project completion, sPower will restore road damage determined to be caused by construction vehicle negligence in coordination with the counties and to the satisfaction of VDOT as permitted.
- If pavement along a haul route becomes damaged due to construction traffic, and is determined by VDOT to be unsafe, sPower will repair the damage at their expense within 48 hours upon notice from the county's transportation planner and/or VDOT.

Temporary Traffic Control Measures

Temporary traffic control measures will be implemented in accordance with the most recent version of the Virginia Work Area Protection Manual (WAPM). Traffic control for construction activity within the public right-of-way will be implemented in accordance with typical traffic control applications. Necessary construction activity within the public right-of-way will be identified as construction documents are prepared and traffic control plans will be included in the construction documents as necessary.

Traffic control measures will also be installed at active construction entrances. These will include but are not limited to the following:

- Advanced warning signs
- Flaggers at the entrance location to facilitate truck turns for wide-load deliveries
- If sight distance is limited on the approach to a construction entrance, additional warning signs will be installed.
- Reduced speed limits
- Additional construction traffic warning signage
- Channelizing devices

These VDOT-approved measures may be implemented as needed and will be addressed during the site plan process and the VDOT permitting process.

Deliveries

- Delivery instruction shall be provided to all suppliers and contractors.
- Trained employees shall assist when deliveries are accessing the Project Site.
- Banksmen shall ensure the safe passage of pedestrians and vehicular traffic when vehicles are being loaded and unloaded.
- Delivery vehicles shall not wait or stack on County roads.
- Suppliers and contractors shall utilize primary delivery routes identified in the Construction Traffic Plan to the extent possible. In the event delivery routes are not feasible, new routes shall be identified and coordinated with County staff.
- sPower and its contractor shall issue maps to suppliers identifying primary delivery routes.
- In the event that GPS maps do not accurately direct delivery trucks to the site, flaggers may be stationed at critical junction points to ensure trucks are traveling the designated haul route.
- Identification of surrounding truck stops shall be identified prior to construction to ensure that trucks can stage overnight prior to scheduled deliveries.
- Permits for oversized or overweight loads, if any, on primary delivery routes shall be obtained from VDOT and coordinated with the County. Such permit loads shall be subject to the conditions of the permit at the time of issuance.

Safety

- Where necessary, flagmen with communication devices shall be used to coordinate delivery and hauling activities at the Project Site.
- General construction signs shall be placed in pre-approved areas along primary delivery routes in the vicinity of the Project Site to notify residents of construction delivery locations.

Parking

- On-site parking will be provided adjacent to construction entrances within the project where feasible. Parking area size will fluctuate based on the construction phasing and number of workers needed at each entrance.
- If offsite parking is needed, the contractor will utilize multiple seat vehicles/shuttle buses/vans to transport employees to and from various construction areas within the site to reduce the number of vehicle trips between sites and optimize the use of parking areas around the project.

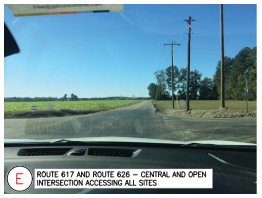
PREFERENCE 1 ROUTE

A ROUTE 460 – A BUSY 4–LANE HIGHWAY IN THIS PORTION CURRENTLY WITH FREQUENT TRUCK TRAFFIC

B ROUTE 617 – A DIVIDED ROAD IN THIS PORTION WITH HOMES, CHURCHES, AND BUSINESSES ALONG THE ROAD

C ROUTE 617 – A DIVIDED ROAD IDEAL FOR HAULING

D ROUTE 617 MILL SWAMP BRIDGE– NO POSTED CAPACITY


E ROUTE 617 AND ROUTE 626 – CENTRAL AND OPEN INTERSECTION ACCESSING ALL SITES

PREFERENCE 2 ROUTE

F ROUTE 10 – A DIVIDED ROAD WITH LIMITED SHOULDERS

G ROUTE 626 – A NARROW, UNDIVIDED ROAD WITH LIMITED SHOULDER SPACE

SITE AND INFRASTRUCTURE CONSIDERATIONS

H ROUTE 621 MILL SWAMP BRIDGE – A POSTED 14 TON CAPACITY MAKING THIS A LESS VIABLE ROUTE

I ROUTE 621, THE PONS GENERAL STORE – POTENTIAL TO IMPACT THIS BUSINESS MAKES THIS A LESS VIABLE ROUTE

J ROUTE 31 – POTENTIAL TO NEGATIVELY IMPACT BUSINESSES AND HOUSES MAKES THIS ROAD A LESS VIABLE ROUTE

K ROUTE 617 – THE NARROW ROAD WIDTH, ROADSIDE DITCHES, AND TREE CANOPY MAKES THIS ROAD A LESS VIABLE ROUTE

L ROUTE 618 BRIDGE – NO POSTED CAPACITY AND NOT LOCATED ON A PREFERRED ROUTE

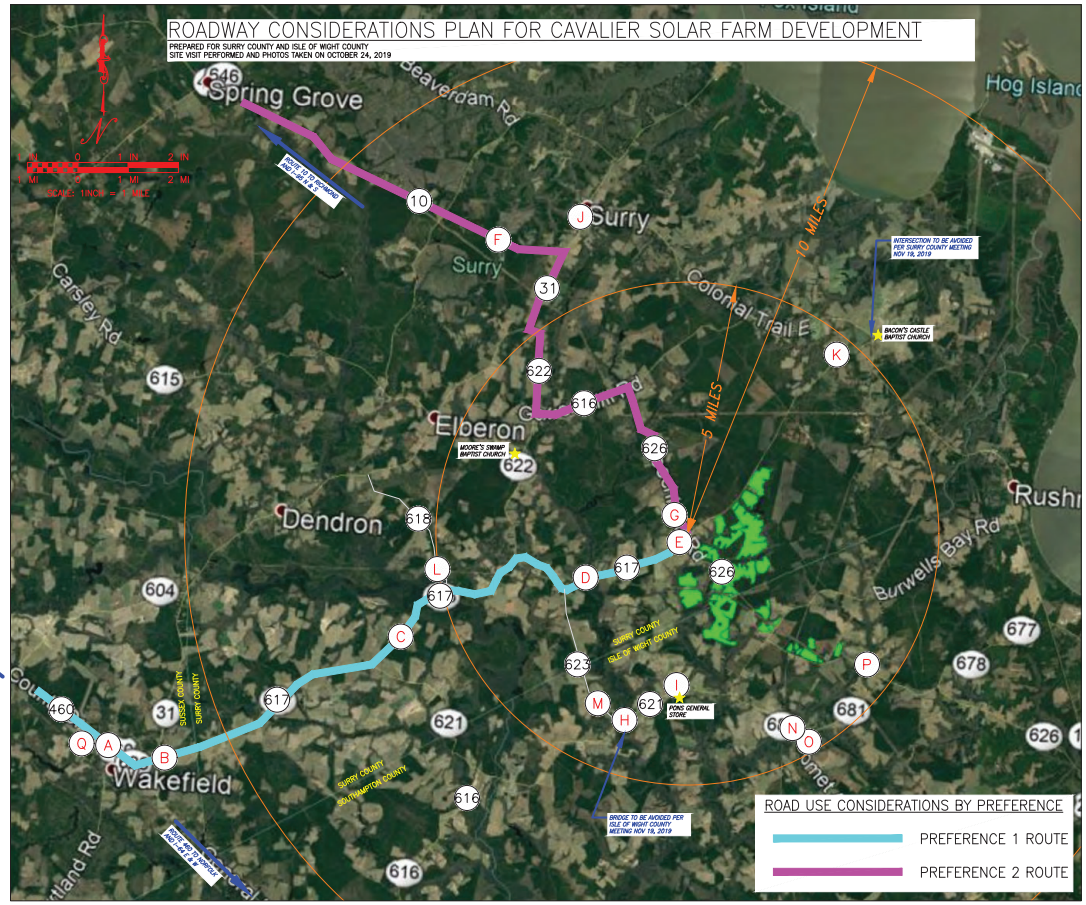
M ROUTE 623 – THE NARROW ROAD WIDTH, ROADSIDE DITCHES, AND TREE CANOPY MAKES THIS ROAD A LESS VIABLE ROUTE

N ROUTE 681 STALLINGS CREEK BRIDGE – NO POSTED CAPACITY AND NOT LOCATED ON A PREFERRED ROUTE

O ROUTE 681 COMET SWAMP BRIDGE – NO POSTED CAPACITY BUT NARROW MAKING THIS ROAD A LESS VIABLE ROUTE

P ROUTE 626 STALLINGS CREEK BRIDGE – A POSTED 18 TON CAPACITY MAKING THIS A LESS VIABLE ROUTE

Q THE TIDEWATER ACADEMY IS LOCATED ON THE PREFERENCE 1 AND 2 ROUTES, HOWEVER ROUTE 460 CURRENTLY HAS TRUCK TRAFFIC



DRAWING TITLE: ROAD USE PLAN

CLIENT: S-POWER, An AES and AIMCo Company

PROJECT: CAVALIER SOLAR ENERGY GENERATION PROJECT, SURRY AND ISLE OF WIGHT COUNTIES, VIRGINIA

ISSUING OFFICE: Pittsburgh | 385 E. Waterfront Drive, Homestead, PA 15120

gai consultants

NO. | DATE: | DWN: | CHK: | APV: | DESCRIPTION: | REVISION RECORD

This drawing was produced with computer aided drafting technology and is supported by electronic display files. Do not make this drawing via manual drafting methods.

GAI CAD FILE PATH: Z:\Energy\SURVEY\C190503.02 - Cavalier Solar #2 Use\CAD\Production DWGs\C190503-02-C001-rev.dwg PLOTTED ON: 4/15/2020 1:33:33 PM PLOTTED BY: Tyler Howe PLOT FILE: Gtitle

DRAFT

DRAWN BY:	CHECKED BY:	APPROVED BY:
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	AS SHOWN	MO/DY/201_

SHEET NO.: 1 OF 1

REVISION: A/1

GAI FILE NUMBER: C190503-02-C001-rev

ALT./CLIENT DRAWING NUMBER:

GAI DRAWING NUMBER: C001

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Exhibit G – Property Deeds

278-375

Union Camp Corporation
TO: # 57
Virginia Electric and Power Company

verified and mailed to
VEPCO P O Box 26666
Richmond23261
this 5 day of Feb 1982

BOOK 278 PAGE 375

THIS DEED OF CORRECTION, Made this 13th day of January, 1982, by and between UNION CAMP CORPORATION, a Virginia corporation, hereinafter called "Grantor", party of the first part, and VIRGINIA ELECTRIC AND POWER COMPANY, a Virginia corporation, party of the second part;

WHEREAS, by deed dated December 13, 1979, recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, in Deed Book 266, page 193, the parties of the first part granted and conveyed unto the party of the second part a certain piece or parcel of land containing 7.39 acres, together with certain rights in property lying adjacent thereto, as shown on the plat attached to said deed as a part thereof, marked "Virginia Electric and Power Company, Plat To Accompany Deed From Union Camp Corporation"; and,

WHEREAS, the land conveyed to the party of the second part by said deed of December 13, 1979, was erroneously described in said deed; and,

WHEREAS, the party of the second part has requested the parties of the first part to execute a deed correctly describing said land;

NOW, THEREFORE, THIS DEED OF CORRECTION WITNESSETH: That, for and in consideration of the premises and in further consideration of the sum of $1 cash in hand paid by the party of the second part unto the parties of the first part, the receipt whereof is hereby acknowledged, the parties of the first part do hereby grant and convey unto the party of the second part, with General Warranty of Title, the following described property:

Description 1-11-82 JCA OK

For Plat See:
Plat Book 10
Page 43

All that certain piece or parcel of land lying, being and situate in Hardy Magisterial District in Isle of Wight County, Virginia, said piece or parcel of land being shown on plat hereto attached and made a part hereof and being described as follows:

Beginning at a point in the property line dividing Grantor's property and property of T. P. Batten, Jr., which point is S. 57° 09' 53" E. 146.72 feet along said property line from a property corner, marked by a concrete monument; thence S. 57° 09' 53" E. 53.88 feet along said property line to a point, marked by a 24-inch pine; thence S. 57° 11' 43" E. 175.67 feet along said property line to a point, marked by a 12-inch maple; thence S. 58° 54' 55" E. 134.72 feet along said property line to a point, marked by a 40-inch dead pine; thence S. 57° 11' 00" E. 134.01 feet along said property line to a point, marked by a 30-inch dead pine; thence S. 58° 54' 18" E. 148.24 feet along said property line to a point, marked by a 12-inch pine; thence S. 57° 40' 22" E. 407.59 feet along said property line to a point, marked

by a 30-inch pine; thence S. 53° 36' 18" E. 23.45 feet along said property line to a point in the centerline of State Highway Route No. 626; thence S. 65° 45' 49" W. 364.49 feet along the centerline of said Highway to a point; thence N. 62° 11' 31" W. 850.0 feet through Grantor's property to a point, marked by a pipe; thence N. 27° 48' 29" E.370.92 feet through Grantor's property to the point of beginning; and containing 7.39 acres; said piece or parcel of land being shown on plat marked "Virginia Electric and Power Co., Plat To Accompany Deed From Union Camp Corporation", hereto attached and made a part hereof.

Said piece or parcel of land being a portion of the same property conveyed to Camp Manufacturing Company (now Union Camp Corporation) by H. Clifford Bangs and R. A. Edwards, Executors of the Estate of B. P. Chapman, deceased by deed dated September 18, 1941, recorded October 27, 1941 in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia in Deed Book 119, page 232. Subject to easements and encumbrances of record or evidenced by possession or use.

Grantor covenants that it has the right to convey the said land to the party of the second part; that it has done no act to encumber the said land; that the party of the second part shall have quiet possession of said land, free from all encumbrances; and that Grantor will execute such further assurances thereof as may be requisite.

IN WITNESS WHEREOF, the Grantor has caused its corporate name to be signed hereto by its Senior Vice President, all as of the day and year first above written.

UNION CAMP CORPORATION

ATTEST:

E C Mann
Assistant Secretary

By J. D. Munford
Senior Vice President

BOOK 278 PAGE 377

STATE OF VIRGINIA)
) To-wit:
COUNTY OF ISLE OF WIGHT)

I, Kathleen H. Pixley, a Notary Public in and for the ~~City aforesaid,~~ County aforesaid, State of Virginia at Large, whose commission expires on the 29th day of April, 19 85, do hereby certify that J. D. Munford and E. C. Minor, whose names are signed to the foregoing writing dated the 13th day of January, 19 82, as Senior Vice President and Assistant Secretary, respectively, of Union Camp Corporation, acknowledged the same before me in the County aforesaid this 13th day of January, 19 82.

Kathleen H. Pixley
Notary Public

VIRGINIA: Clerk's Office of the Circuit Court of the County of Isle of Wight January 19, 1982, at 9:00 o'clock A M, this Easement (Deed of Correction) was received and with the certificate annexed, admitted to record.
TESTE: W. E. Laine, Jr. CLERK. By: Tracy L Willis, D. C

CONSIDERATION:	$500,000.00
GRANTEE'S ADDRESS:	8229 BEECHLAND ROAD ELBERON, VA 23846
THIS INSTRUMENT PREPARED BY:	WILLIAM H. RIDDICK, III SAUNDERS BARLOW RIDDICK BABINEAU, PC P. O. BOX 190
Tax Map #61-5	SMITHFIELD, VA 23431

THE EXISTENCE OF TITLE INSURANCE IS UNKNOWN TO THE PREPARER.
THIS DEED WAS PREPARED WITHOUT THE BENEFIT OF A TITLE EXAMINATION.

THIS DEED OF BARGAIN AND SALE, made and entered into this 27th day of August, 2008, by and between JEFFREY A. SEWARD, married, Grantor, party of the first part, and BEAVERDAM AIR PARK ESTATES, LLC, a Virginia limited liability company, Grantee, party of the second part,

WITNESSETH:

That for and in consideration of the sum of Ten Dollars ($10.00) cash in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged by the party of the first part, the said party of the first part does hereby grant, bargain, sell and convey with GENERAL WARRANTY and ENGLISH COVENANTS OF TITLE unto the Grantee, the following described real estate, to-wit:

All that certain tract or parcel of land in Cobham Magisterial District, Surry County, Virginia, and in Hardy Magisterial District, Isle of Wight County, Virginia, containing 342.75 acres, bounded and described in accordance with a plat entitled 'PLAT SHOWING PROPERTY OF JACK M. GALE SURRY AND ISLE OF WIGHT COUNTIES', made March 1947, by Roy Brinkley, which plat is recorded in the Clerk's Office of the Circuit Court of Surry County in Plat Book 5, at page 7.

LESS, SAVE and EXCEPT 96.7 acres and access thereto conveyed by E. Baxter Seward to Charles A. Nuckles, Jr. by deed dated May 27, 1999 and recorded in the Clerk's Office of the Circuit Court of Surry County in Deed Book 155, at page 885.

Together with all and singular the buildings and improvements, thereon, the rights and privileges, tenements, hereditaments, easements and appurtenances unto the said land belonging or in anywise appertaining.

Being a part of the property conveyed to Jeffrey A. Seward from Elton B. Seward, Jr., et als, by deed of gift dated May 30, 2006, and recorded in the Clerk's Office of the Circuit Court of Surry County, Virginia, in Deed Book 207, page 778.

This conveyance is made expressly subject to the restrictions, conditions, rights-of-way, and easements, if any, contained in the instruments constituting the chain of title to the property conveyed herein, and to matters visible upon inspection.

Whenever used herein, the singular shall include the plural, the plural the singular, and the use of any gender shall include all other genders.

WITNESS the following signature and seal:

Jeffrey A. Seward (SEAL)
JEFFREY A. SEWARD

STATE OF VIRGINIA,
COUNTY OF ISLE OF WIGHT, to-wit:

The foregoing instrument was acknowledged before me this 27th day of August, 2008, by Jeffrey A. Seward.

My commission expires: 3-31-2009.

William H. Riddick, III
Notary Public

WILLIAM H. RIDDICK, III NOTARY PUBLIC MY COMMISSION NUMBER 150404 COMMONWEALTH OF VIRGINIA

INSTRUMENT #080030686
RECORDED IN THE CLERK'S OFFICE OF
COUNTY OF SURRY ON
AUGUST 29, 2008 AT 11:45AM
$500.00 GRANTOR TAX WAS PAID AS
REQUIRED BY SEC 58.1-802 OF THE VA. CODE
STATE: $250.00 LOCAL: $250.00

GAIL P. CLAYTON, CLERK
RECORDED BY: KRM

T. Jones : Jan.

INSTRUMENT #080004735
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
SEPTEMBER 2, 2008 AT 09:24AM

SHARON N. JONES, CLERK
RECORDED BY: DDS

DATE: 6/19/13
MAILED TO: Carrell Blanton Garrett

BOOK 256 PAGE 702 ZH

This instrument was drafted by and return to:

Stephen M. Watson, Esq., VA State Bar No. 26079
Carrell Blanton Garrett & Van Horn, PLC
7275 Glen Forest Dr., Ste. 310
Richmond, Virginia 23226
(804) 285-7900

TAX MAP REFERENCE NO.: 60 9

Consideration: None
Recordation Tax Due: $0.00
EXEMPT FROM TAX: VA. CODE SECTION 58.1-810(1)
Title Insurance Co.: The existence of title insurance is unknown to the preparer

DEED OF CONFIRMATION

THIS DEED, made on January 29, 2013, by and between **RICHARD L. BYRUM** and **JANICE F. BYRUM**, husband and wife, and **JOHN H. BYRUM** and **JEANETTE N. BYRUM**, husband and wife, hereinafter referred to as the "Grantors," and **RICHARD L. BYRUM** and **JANICE F. BYRUM**, husband and wife, and **JOHN H. BYRUM** and **JEANETTE N. BYRUM**, husband and wife, hereinafter referred to as the "Grantees."

WHEREAS, by deed dated December 21, 1995 and recorded December 29, 1995 in the Clerk's Office of the Circuit Court of Surry County, Virginia, in Deed Book 139, page 189, William C. Johnston, as sole acting Trustee under a certain Trust Agreement dated November 29, 1978 conveyed the real estate described hereinbelow to the Grantees therein, to be held by them as follows: a one-half undivided interest to be held by Richard L. Byrum and Janice F. Byrum, as tenants by the entirety with right of survivorship as at common law, and a one-half undivided interest to be held by John H. Byrum and Jeanette N. Byrum, as tenants by the entirety with right of survivorship as at common law; and

WHEREAS, the parties enter into this Deed of Confirmation to establish and/or ratify that each one-half undivided interest is held as a tenant in common with the other one-half undivided interest, and not as joint tenants with right of survivorship, such that upon the death of the survivor of each married couple, said survivor's one-half undivided interest shall pass at his or her death to his or her heirs, successors, assigns or devisees, and not to the other married couple, or survivor thereof.

This deed is being transferred for estate planning purposes and no title search of the property has been done for this transfer. The existence of title insurance is unknown to the preparer.

WITNESSETH:

That for and in consideration of the benefits accruing to themselves and/or their heirs, executors and/or assigns, acknowledged by the Grantors herein to have value of TEN

36174

DOLLARS ($10.00), cash in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged at and before the signing, sealing and delivery of these presents, the Grantors hereby grant, sell, and convey, with GENERAL WARRANTY and ENGLISH COVENANTS OF TITLE, the real estate described hereinbelow to the Grantees, to be held by them as follows: a one-half undivided interest to be held by Richard L. Byrum and Janice F. Byrum, as tenants by the entirety with right of survivorship as at common law, and a one-half undivided interest to be held by John H. Byrum and Jeanette N. Byrum, as tenants by the entirety with right of survivorship as at common law, with each one-half undivided interest being held as a tenant in common with other one-half undivided interest:

> All of those three (3) contiguous tracts, pieces or parcels of land together having an aggregate acreage of 473 acres, more or less, conveyance in gross and not by the acre, situate, lying and being in the County of Surry, State of Virginia, and generally known and described as the real estate of which William P. Gwaltney died seized and possessed, which lies on both sides of the secondary road, Route 623, leading from Mill Swamp Church to Runnymede, and which as one tract or parcel of land is generally described as being bounded on the North by the Thomas and Simmons lands, on the East by the Gwaltney mill pond, and on the South by the lands formerly belonging to Oscar Drew and the lands of Earnest Wells and on the West by the lands of Earnest Lane. It being the same real estate of which the late William P. Gwaltney died seized and possessed and which by his last will and testament bearing date the 11th., day of September 1906, and duly probated and recorded in the Clerk's Office of the County of Surry, State of Virginia, on May 18, 1917, in Will Book 14, at page 272, he devised to his wife, Leonetta Madeline Gwaltney for and during her natural life, and who is now deceased, and at her death to be divided equally between his children thereinnamed, namely, Ann Snow, Stanley L., Mary L., Madge H., and Taylor W., and the children of his late son, W. Ashton, and the said Stanley L. Gwaltney having acquired the fee simple title to all of said real estate by virtue of the will aforesaid of his late father, a certain deed from Taylor W. Gwaltney, et ux., dated December 12, 1922, and of record in the last mentioned Clerk's Office in Deed Book 37, at page 746, and by another certain deed dated March 30, 1944, and of record in the last mentioned Clerk's Office in Deed Book 46, at page 328, from Ann Gwaltney Ramsey, nee Ann Snow Gwaltney, et als.

Whenever used herein, the singular includes the plural, the plural the singular, and the use of any gender includes all other genders.

The legal description and the names of the record title owners were provided by the parties, and the draftsman assumes no responsibility for their accuracy or correctness.

This deed is made, however, subject to covenants, restrictions, easements, reservations and conditions of record to the extent they may lawfully apply to the property hereby conveyed.

BOOK 256 PAGE 704

WITNESS the following signatures and seals:

Richard L Byrum (seal)
RICHARD L. BYRUM

Janice F Byrum (seal)
JANICE F. BYRUM

John H Byrum (seal)
JOHN H. BYRUM

Jeanette N. Byrum (seal)
JEANETTE N. BYRUM

COMMONWEALTH OF VIRGINIA
COUNTY OF JAMES CITY, to-wit:

I, Stephen M. Watson, a Notary Public in and for the Commonwealth of Virginia, hereby certify that RICHARD L. BYRUM and JANICE F. BYRUM, and JOHN H. BYRUM and JEANETTE N. BYRUM, Grantors, whose names are signed to the foregoing writing dated January 29, 2013, have acknowledged the same before me in my presence in the County and Commonwealth aforesaid.

Given under my hand on January 29, 2013.

Stephen M. Watson
Notary Public

Grantee's Address

14610 Five Forks Road
Windsor, VA. 23487-5854

T. Carroll Blanton

INSTRUMENT [illegible] 174
RECORDED IN THE CLERK'S OFFICE OF
COUNTY OF SURRY, VA
JUNE 5, 2013 AT 9:14AM
GAIL P. CLAYTON, CLERK
BY [illegible]
DEPUTY CLERK

STEPHEN M. WATSON
NOTARY PUBLIC
REGISTRATION NO. 7630440
MY COMM. EXPIRES: 04/30/2016

This deed is exempt from recordation taxes pursuant to §58.1-811D of the Code of Virginia, 1950, as amended.

TAX I.D.# 10-01-017, 10-01-024 and 10-01-030
Prepared by and return to: Frank M. Rawls, VSB #16828
332 W. Constance Road, Suffolk, VA 23434

THE EXISTENCE OF TITLE INSURANCE IS UNKNOWN TO THE PREPARER.

THIS DEED OF GIFT, made this 11th day of December, 2019 between Marie S. DELK, widow, party of the first part, "Grantor", and Julie R. DELK, party of the second part, "Grantee", whose address is: 804 General Pickett Drive, Suffolk, Virginia 23434.

WITNESSETH: That for and in consideration of the sum of One Dollar ($1.00), cash in hand paid, the receipt of which is hereby acknowledged, the party of the first part does hereby grant, convey and give unto the party of the second part, with General Warranty and English Covenants of Title, with a life estate reserved in said property to Marie S. Delk for and during her natural life, the following described property, to-wit:

PARCEL ONE - Tax ID #10-01-017

"All that certain tract, piece or parcel of land lying, being and situate in Hardy Magisterial District, County of Isle of Wight, State of Virginia, containing one hundred and twenty five (125) acres, be the same more or less, and which is bounded as follows, to-wit: on the North by the lands of Miss S. P. Ward; on the East by the County road leading from Smithfield to Mill Swamp Church; on the South by the lands belonging to B. G. Carroll and brothers, and on the West by the lands belonging to M. A. Delk and J. S. Gale."

The above described parcel is subject to a boundary line agreement dated September 3, 1948 by and between R. M. Carroll, a widower, James M. Carroll and Thelma D. Carroll, his wife and T. H. Delk and Mamie J. Delk, his wife, and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 130 at page 226.

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& RAINES, P.C.
332 W. Constance Road
Suffolk, VA 23434
(757) 539-2400
(757) 934-0953 FAX

The above described parcel is further subject to a deed of easement for ingress and egress dated August 1, 2008 by and between Dan G. Delk, married, Grantor and James M. Carroll, Jr., individually and as Trustee under the Carroll Family Living Trust dated March 5, 2002 and recorded in the aforesaid Clerk's Office as Instrument # 08-5031.

It being the same property conveyed to T. H. Delk by deed of George W. Delk and A. Carey Delk, his wife, dated August 19, 1927 and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 99 at page 234.

T. H. Delk (a/k/a Thomas H. Delk, Sr.) died testate on February 20, 1952 and by the terms of his Will recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Will Book 36 at page 79, he devised a life estate in his real property acquired in Deed Book 99 at page 234 to his wife, Mamie J. Delk. Upon her death, he directed that said property pass to his son, Thomas H. Delk, Jr. upon the condition that he pay the sum of $2,000.00 in cash to his son, Robert J. Delk. A list of heirs for Thomas H. Delk, Sr. is recorded in the aforesaid Clerk's Office in Deed Book 137 at page 442.

Mamie J. Delk died testate on July 13, 1956. Her Will is recorded in the aforesaid Clerk's Office in Will Book 36 at page 255.

Thomas H. Delk, Jr. died testate on August 12, 1966 and by the terms of his Will recorded in the aforesaid Clerk's Office in Will Book 37 at 326, he devised a life estate in his real property to his brother, Robert J. Delk. Upon his death, he directed that said property pass to his nephew, Dan G. Delk, upon the condition that he pay $2,500.000 to his niece, Nancy Delk Hall, within twelve months after the date of the death of Robert J. Delk.

Robert J. Delk died on May 29, 1971. His Will was recorded in the aforesaid Clerk's Office in Will Book 38 at page 81, evidence of payment to Nancy Delk Hall was recorded in Will Book 38 at page 103, and an Affidavit was recorded in Deed Book 208 at page 370.

Dan G. Delk died testate on February 23, 2011 and by the terms of his Will, a copy of which is recorded in the aforesaid Clerk's Office as Instrument No. 110000079 (CWF 11-79), he devised his real property to his wife, Marie S. Delk.

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PARCEL TWO – TAX ID #10-01-024

"FIRST: Beginning at a point on the road leading from Mill Swamp Church to Burwell's Bay and at the center of a ditch which partly crosses the field lying South of the dwelling house; running thence in a Westerly direction down the center of said ditch to where the said ditch empties into a branch; running thence in a more Westerly direction down said branch along a line of marked trees to a Black Gum in the center of the Swamp, a corner on the lands of C. M. C. Gale; running thence in a Northerly direction up the meanderings of said swamp it being the dividing line between the lands herein described and the land belonging to C.M.C. Gale, to the head of a branch, a corner on the land of C. M. C. Gale and the lands herein described; running thence in an Easterly direction along the lands of the said C. M. C. Gale to the lands of W. H. Gale, a corner on what is known as the Surry road; running thence along the lands of the said W. H. Gale and down the Surry Road to a corner on the said Burwell's Bay Road running thence down the said Burwell's Bay Road, toward Mill Swamp Church, to the center of said ditch, the point of beginning.

SECOND: Beginning at a red oak on the East side of the County road leading from Mill Swamp Church to Burwell's Bay, and opposite the point at the center of the said ditch above mentioned; running thence in an Easterly direction and parallel with the County road leading from Burwell's Bay road to Smithfield to the line dividing the land herein described from the land formerly belonging to George J. Barlow, and now owned by M. H. Delk, running thence in a Southerly direction along the said boundary line of the said land now owned by M. H. Delk, to the land now owned by W. B. Jones, running thence along the boundary line of the land of W. B. Jones and the lands herein described to a marked pine tree, a corner on the land of W.B. Jones and the land formerly belonging to W. H. Little; running thence in a Northerly direction, and in a straight line to a marked pine tree, a corner on the said county road leading from Mill Swamp Church to Burwell's Bay and at a point opposite a ditch at a corner of the field lying South of the dwelling house; running thence in a Northeasterly direction down the said Burwells Bay Road to a red oak the point of beginning."

LESS, SAVE AND EXCEPT:

1. Land conveyed to the Commonwealth of Virginia for Route 626 by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 127 at page 593.

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2. 2.63 acres identified as TM 10-01-024A and conveyed to Milton M. James and Elizabeth H. James, husband and wife, by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 208 at page 502.

3. 8.2863 acres identified as TM 10-01-024B and conveyed to Ronald B. Boyers and Tanya H. Boyers, husband and wife, by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 348 at page 285.

The above described parcel is subject to a boundary line agreement dated April 1, 2013 by and between Michael A. Seward and Emily B. Seward, husband and wife, Grantor and Grantee, and Marie S. Delk, a widow and not remarried, Grantor and Grantee, recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia as Instrument #130002518.

The above described parcel is further subject to a deed of easement by and between Dan G. Delk, married, Grantor, and J. B. Whitmore and Betty W. Clark, Grantees, recorded in the aforesaid Clerk's Office as Instrument #970000574.

It being a part of the same property conveyed to T. H. Delk by deed from George F. Whitley, Special Commissioner dated July 3, 1920 and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 91 at page 239.

T. H. Delk (a/k/a Thomas H. Delk, Sr.) died testate on February 20, 1952 and by the terms of his Will recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Will Book 36 at page 79, he devised a life estate in his real property acquired in Deed Book 91 at page 239 to his wife, Mamie J. Delk. Upon her death, he directed that said property pass to his son, Thomas H. Delk, Jr. upon the condition that he pay the sum of $2,000.00 in cash to his son, Robert J. Delk. A list of heirs for Thomas H. Delk, Sr. is recorded in the aforesaid Clerk's Office in Deed Book 137 at page 442.

Mamie J. Delk died testate on July 13, 1956. Her Will is recorded in the aforesaid Clerk's Office in Will Book 36 at page 255.

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Thomas H. Delk, Jr. died testate on August 12, 1966 and by the terms of his Will recorded in the aforesaid Clerk's Office in Will Book 37 at 326, he devised a life estate in his real property to his brother, Robert J. Delk. Upon

his death, he directed that said property pass to his nephew, Dan G. Delk, upon the condition that he pay $2,500.000 to his niece, Nancy Delk Hall, within twelve months after the date of the death of Robert J. Delk.

Robert J. Delk died on May 29, 1971. His Will was recorded in the aforesaid Clerk's Office in Will Book 38 at page 81, evidence of payment to Nancy Delk Hall was recorded in Will Book 38 at page 103, and an Affidavit was recorded in Deed Book 208 at page 370.

Dan G. Delk died testate on February 23, 2011 and by the terms of his Will, a copy of which is recorded in the aforesaid Clerk's Office as Instrument No. 110000079 (CWF 11-79), he devised his real property to his wife, Marie S. Delk.

PARCEL THREE – TAX ID #10-01-030

"All that certain piece or parcel of land situate, lying and being in Hardy Magisterial District, of the County of Isle of Wight, State of Virginia, bounded and described as follows: Beginning at a Red Oak on the East side of the County Road leading from Mill Swamp Church to Burwell's Bay at a point opposite the center of a ditch running partly across a field on the West side of the said Burwell's Bay Road and lying South of the dwelling house, the said ditch being about the center of the said field, the said Red Oak being a corner on the said County Road, and the land allotted to Sallie P. Ward; running thence in an Easterly direction and parallel with the County Road leading from Mill Swamp Church and Burwell's Bay County Road to Smithfield, Virginia, to the boundary line dividing the lands herein described from the lands formerly belonging to the estate of Geo. J. Barlow, and now owned by M. H. Delk; running thence in a northerly direction and along the lands of the said M. H. Delk to the County Road leading to Smithfield; running thence across the said Road to a Gum Stump leading to Smithfield, and the lands belonging to the Shaw Land and Timber Company; running thence in a Northeasterly direction along the lands of the said Shaw Land and Timber Company to an iron post, a corner on the lands of the said Shaw Land and Timber Company; running thence in a Westerly direction along the lands of the said Shaw Land and Timber Company and the lands of W. H. Gale to the County Road leading from Mill Swamp Church to Burwell's Bay; running thence in a Southerly direction to said Mill Swamp Church to Burwell's Bay Road to a Red Oak, point of beginning."

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& RAINES, P.C.
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Suffolk, VA 23434
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(757) 934-0953 FAX

LESS, SAVE AND EXCEPT:

Land conveyed to the Commonwealth of Virginia for Route 626 by deed recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 127 at page 593.

The above described parcel is subject to a boundary line agreement dated June 13, 1989 by and between Dan G. Delk and Marie S. Delk, his wife, and Craig W. Huber and Bonnie G. Huber, and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 356 at page 748.

The above described parcel is further subject to a drainage easement to the Commonwealth of Virginia recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 213 at page 140.

It being a part of the same property conveyed to T. H. Delk by deed from John R. Ward and Mary J. Ward, his wife, dated September 5, 1918 and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Deed Book 87 at page 648.

T. H. Delk (a/k/a Thomas H. Delk, Sr.) died testate on February 20, 1952 and by the terms of his Will recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia in Will Book 36 at page 79, he devised a life estate in his real property acquired in Deed Book 87 at page 648 to his wife, Mamie J. Delk. Upon her death, he directed that said property pass to his son, Alfred M. Delk, upon the condition that he pay the sum of $3,000.00 to his son, Robert J. Delk.

Mamie J. Delk died testate on July 13, 1956. Her Will is recorded in the aforesaid Clerk's Office in Will Book 36 at page 255.

There is no proof of record whether or not Alfred M. Delk paid Robert J. Delk the money required to inherit the property from his father. Robert J. Delk died on May 29, 1971 and his Will is recorded in the aforesaid Clerk's Office in Will Book 38 at page 81.

Alfred M. Delk died on February 13, 1959 and according to information given in the derivation clause for a deed recorded in Deed Book 172 at page 254, he left the following individuals as his sole heirs: Gladys G. Delk, his wife, and Dan G. Delk and Nancy Delk Hall, his two children.

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Nancy Delk Hall and her husband, Earl T. Hall, conveyed their one-half interest in the property described in Deed Book 87 at page 648 that she acquired by intestate succession from her father, Dan G. Delk, subject to the dower interest of Gladys G. Delk.

Gladys G. Delk remarried on July 25, 1970 to Joseph John Seward, Jr. Gladys G. Delk Seward died on November 18, 1993.

Dan G. Delk died testate on February 23, 2011 and by the terms of his Will, a copy of which is recorded in the aforesaid Clerk's Office as Instrument No. 110000079 (CWF 11-79), he devised his real property to his wife, Marie S. Delk.

This conveyance is made expressly subject to all easements, conditions, restrictions and reservations contained in duly recorded deeds, plats, and any other instruments constituting constructive notice in the chain of title to the property hereby conveyed, which have not expired by a limitation of time contained therein or have not otherwise become ineffective.

WITNESS the following signature and seal:

Marie S. Delk (SEAL)

STATE OF VIRGINIA
CITY OF SUFFOLK, to-wit:

I, Cynthia Powell Warren, Notary Public in and for the City and State aforesaid, do hereby certify that Marie S. Delk, whose name is signed to the foregoing writing, has acknowledged the same before me in the City and State aforesaid.

Given under my hand this 19th day of March, 2020.

CYNTHIA POWELL WARREN
NOTARY PUBLIC
REGISTRATION # 189917
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
JUNE 30, 2021

Cynthia Powell Warren
Notary Public

FERGUSON, RAWLS
& RAINES, P.C.
332 W. Constance Road
Suffolk, VA 23434
(757) 539-2400
(757) 934-0953 FAX

INSTRUMENT # 200001416
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
MARCH 23, 2020 AT 03:45PM

KATHLEEN S. TORRENCE, CLERK
RECORDED BY: DDS

THIS BOUNDARY LINE DEED, made this 16th day of March, 1981, by and between E. BAXTER SEWARD and DOROTHY B. SEWARD, his wife, parties of the first part; and E. T. LOGAN, JR. and ELSIE U. LOGAN, his wife and EMILY V. LOGAN, single, parties of the second part.

WITNESSETH:

THAT WHEREAS, the parties hereto own adjoining property in Blackwater Magisterial District, Surry County, Virginia; and

WHEREAS, the parties have caused to be run a survey of the boundary line, as set out from a property corner 48" W. Oak on a property line of the parties and Roy E. Seward to a point marked Iron Pipe Set on the property line of the parties and that of Bell as shown on a certain plat entitled "Boundary Agreement as per Attached Document Between E. Baxter Seward and E. T. Logan, Jr., Blackwater District, Surry County, Virginia, Surveyed by J. R. Stainback, III, Certified Land Surveyor, Suffolk, Virginia, made January 30, 1981, Plat No. 00042", attached to and made a part of this deed and incorporated herein by reference as if textually set out herein; and

WHEREAS, the parties desire to establish the said line as the true boundary between the respective property.

NOW, THEREFORE, for and in consideration of the premises and in order to establish the boundary line between the respective property, the parties of the first part doth grant and convey, release and quitclaim to and unto the said E. T. LOGAN, JR. and ELSIE U. LOGAN, his wife, and EMILY V. LOGAN, single, parties of the second part, all of their right, title and interest, if any, in and to that portion of the property shown on the attached plat lying SOUTH AND WEST of the line shown on the plat designated as E. T. LOGAN, JR. beginning at the property corner 48" W. Oak; thence S. 5° 09' 33" E. 211.52 feet; thence S. 6° 55' 13" E. 68.06 feet; thence S. 16° 50' 31" W. 212.85 feet to a property corner 36" pine; thence S. 66° 04' 43" W. 290.76 feet to

a 12" marked holly; thence N. 81° 23' 31" W. 55.45 feet to an 18" marked maple; thence S. 42° 43' 09" W. 153.15 feet; thence S. 59° 50' 52" W. 153.18 feet; thence S. 46° 12' 56" W. 221.29 feet to a 6" marked gum; thence S. 74° 21' 11" W. 188.46 feet; thence S. 74° 34' 21" W. 77.21 feet; thence S. 79° 35' 00" W. 412.83 feet; thence S. 80° 16' 28" W. 613.41 feet to a post on property corner; thence S. 17° 30' E. 474.86 feet; thence S. 17° 30' E. 326.26 feet to an iron pipe set.

And the parties of the second part do grant and convey, release and quitclaim to and unto the said parties of the first part all of their right, title and interest, if any, in and to that portion of the property lying NORTH AND EAST of the aforesaid line and designated on the said plat as E. B. Seward "Home" and E. B. Seward "Williams".

WITNESS the following signatures and seals:

E. Baxter Seward (SEAL)
E. BAXTER SEWARD

Dorothy B. Seward (SEAL)
DOROTHY B. SEWARD

E. T. Logan, Jr. (SEAL)
E. T. LOGAN, JR.

Elsie U. Logan (SEAL)
ELSIE U. LOGAN

Emily V. Logan (SEAL)
EMILY V. LOGAN

STATE OF VIRGINIA,

COUNTY OF SURRY, to-wit:

The foregoing instrument dated March 16, 1981, was acknowledged before me this 30th day of March, 1981, by E. BAXTER SEWARD and DOROTHY B. SEWARD, his wife.

My commission expires: August 29, 1983.

Dale J. Fuss
NOTARY PUBLIC

STATE OF VIRGINIA,

COUNTY OF SURRY, to-wit:

The foregoing instrument dated March 16, 1981, was acknowledged before me this 3rd day of June, ~~March~~, 1981, by E. T. LOGAN, JR. and ELSIE U. LOGAN, his wife.

My commission expires: August 29, 1983.

Dale J. Fuss
NOTARY PUBLIC

STATE OF VIRGINIA,

COUNTY OF SURRY, to-wit:

The foregoing instrument dated March 16, 1981, was acknowledged before me this 3rd day of June, ~~March~~, 1981, by EMILY V. LOGAN, single.

My commission expires: August 29, 1983.

Dale J. Fuss
NOTARY PUBLIC

THIS INSTRUMENT RETURNED TO:
Kilpatrick, Stockton & Cranwell

VIRGINIA: In the Clerk's Office of the Circuit Court of Surry County, this 4th day of June, 1981, at 4:07 o'clock P. M. the foregoing instrument was received and, upon certificate of acknowledgment annexed, admitted to record.

Teste: Frank V. Emmerson, Jr., Clerk

By: _____

BOOK 92 PAGE 212

SURVEYORS STATEMENT:

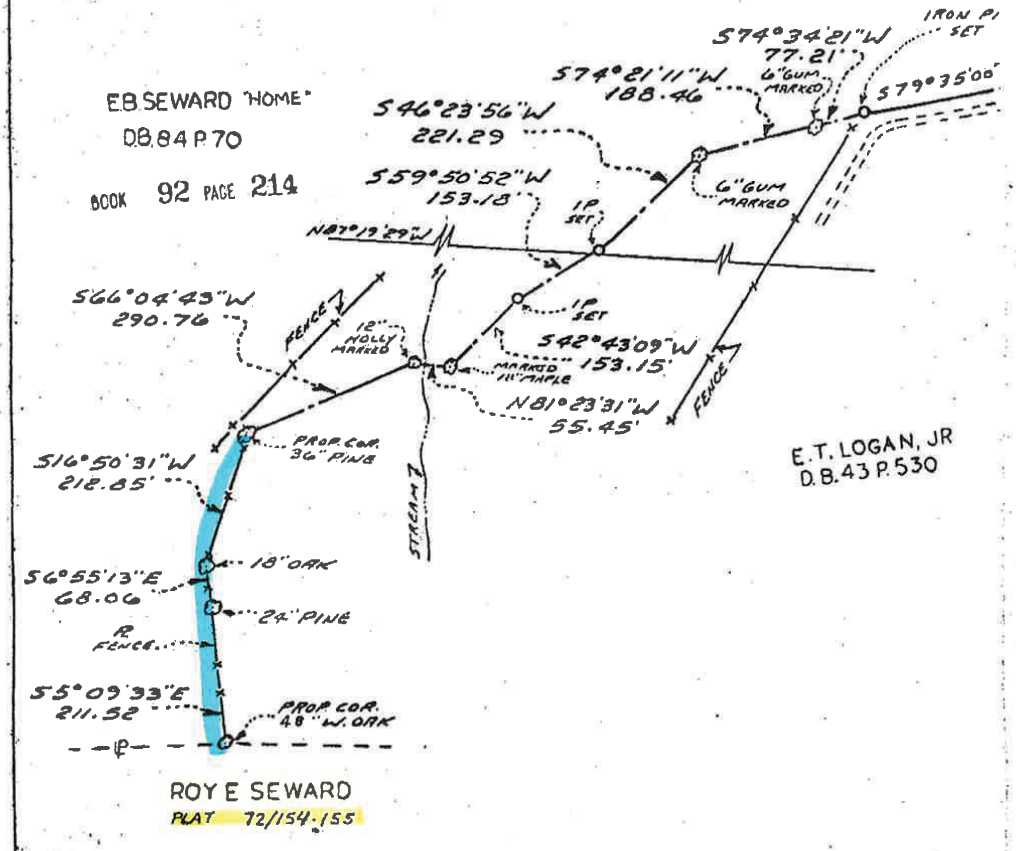
THIS IS TO CERTIFY, THAT ON JAN. 29, 1981 I J.R. STAINBACK III MADE A SURVEY AND INSPECTED THE BOUNDARY AS SHOWN HEREON.

THE SURVEY WAS MADE BY A TRANSIT AND STEEL TAPE METHOD WITH THE USE OF ELECTRONIC COMPUTERS. EXISTING DEEDS WERE USED WHERE POSSIBLE AND EXISTING PHYSICAL FEATURES OF DEED CALLS, FENCES, ROADS, STONES AND IMPROVEMENTS WITH THE INTENTIONS OF PROPERTY LINES AS PER FIELD SURVEY.

PLEASE NOTE THAT THIS IS NOT A CLOSED SURVEY

NORTH ± 2°
GRID

J.R. Stainback III C.L.S.
VA. CERT. NO. 1387



I.P. = IRON PIPE

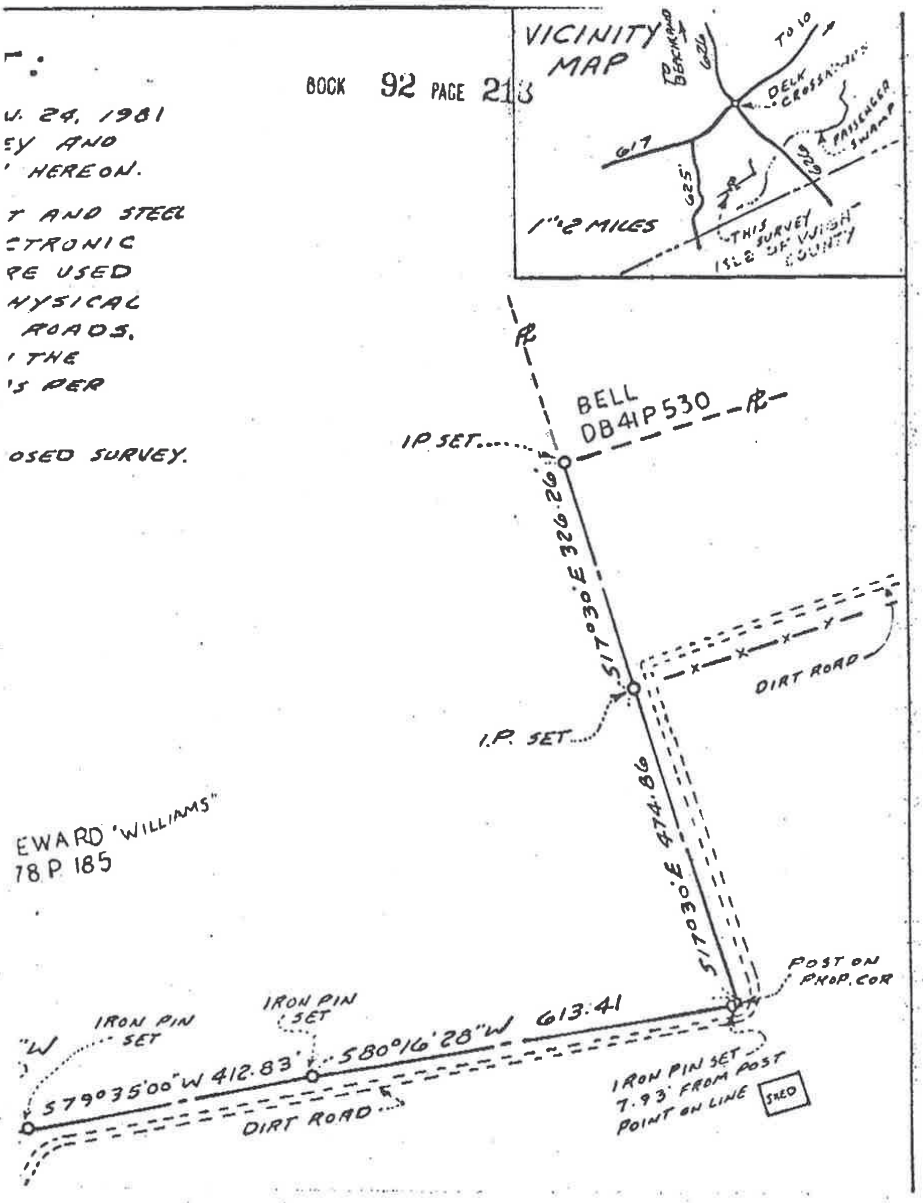
PLAT NO. 00048

T:

U. 24, 1981
EY AND
' HEREON.

T AND STEEL
CTRONIC
RE USED
HYSICAL
ROADS.
' THE
'S PER

OSED SURVEY.



0225
0160
3/3/08
Returned to:

BOOK 0225 PAGE 160

This Document was prepared by:
Clinton B. Faison, Jr.
Attorney at Law
P. O. Box 186
Surry, Virginia 23883
(757) 294-3000
Tax Map Parcel #60-1-1

THIS DEED OF GIFT, made this 1st day of February, 2008, by and between **JEFFREY A. SEWARD**, party of the first part and hereinafter styled **"Grantor"**, and **JEFFREY A. SEWARD** and **MELANIE D. SEWARD**, husband and wife, of 435 Bellevue Road, Elberon, Virginia 23846, parties of the second part and hereinafter styled **"Grantees"**.

W I T N E S S E T H : That for and in consideration of the natural love and affection of which the Grantor has for Melanie Seward, she being the wife of the Grantor, and in order to create a tenancy by the entirety with the right of survivorship as at common law in the following described property, and other good and valuable consideration, the Grantor does hereby give, grant and convey unto the said Grantees, as **TENANTS BY THE ENTIRETIES**, with the right of survivorship as at common law, with **GENERAL WARRANTY** and with **ENGLISH COVENANTS of Title**, the following described real estate, together with the buildings and improvements thereon and the appurtenances thereunto belonging, if any, to-wit:

> "All that certain lot, piece or parcel of land situate, lying and being in Isle of Wight County and Surry County, Virginia and containing 256.67 acres as shown on a plat of survey entitled 'PLAT SHOWING PROPERTY OF J. R. BUHLS AND IRENE BUHLS HARDY MAGISTERIAL DISTRICT ISLE OF WIGHT COUNTY, VIRGINIA BLACKWATER MAGIS. DISTRICT SURRY COUNTY, VIRGINIA SCALE 1" = 300' NOV. 28, 1969 SURVEY BY J. E. HENRY C.L.S. TOTAL AREA = 258.71 ACRES' and plat is recorded in the Clerk's Office of the Circuit Court for Isle of Wight County, Virginia in Plat Book 5, page 158, reference being made to the plat of survey for a more complete description of the real estate hereby conveyed."
>
> LESS, SAVE and EXCEPT, 3.915 acres conveyed to Vincent A. Beale by deed dated February 15, 1994,

Clinton B. Faison, Jr.
Attorney at Law
Surry, VA 23883

029923

and recorded in the Clerk's Office aforesaid in Deed Book 431, page 341.

BEING in all respects the same property as that conveyed unto Jeffrey A. Seward by deed dated May 1, 2006 from Seward Farms Partnership, a Virginia general partnership and recorded in the Clerk's Office of the Circuit Court of Surry County in Deed Book 207, at page 125 and in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia as Instrument Number 060003241.

This Parcel is conveyed **SUBJECT TO** a Deed of Trust dated May 3, 2006 from Michael A. Seward, et als, to Richard J. Holland, Jr., et als, Trustees, to secure a note in the original principal amount of $900,000.00 payable to Farmers Bank, Windsor, VA and recorded in the Clerk's Office of the Circuit Court of Surry County in Deed Book 207, at page 134 and in the Clerk's Office of the Circuit Court of Isle of Wight County as Instrument Number 063243.

This conveyance is made **EXPRESSLY SUBJECT** to all, reservations, restrictions, easements, covenants, and conditions as are contained in instruments forming the chain of title to said property, or as may be apparent from a careful inspection of the premises.

It is hereby made manifestly to appear from the tenor of this instrument that survivorship between joint tenants shall not be abolished as provided from by Section 55-20 of the Code of Virginia, 1950, as amended, and it is intended that the part of the one dying first should then belong to the other as provided from by Section 55-21 of the Code of Virginia, 1950, as amended.

WITNESS the following signature and seal:

Jeffrey A. Seward (SEAL)
Jeffrey A. Seward

STATE OF VIRGINIA
COUNTY OF SURRY, to-wit:

The foregoing instrument was acknowledged before me this 1st day of March, 2008, by Jeffrey A. Seward.
My Commission expires: 7/3.10.

PAMELA B. OWNEY
Notary Public
Commonwealth of Virginia
No. 172412
My Commission Expires 7/3.10

Notary Public

INSTRUMENT #080029923
RECORDED IN THE CLERK'S OFFICE OF
SURRY COUNTY ON
MARCH 31, 2008 AT 12:56PM
GAIL P. CLAYTON, CLERK
RECORDED BY: NKB

Clinton B. Faison, Jr.
Attorney at Law
Surry, VA 23883

Wendy

940004080

944080 BOOK 442 PAGE 895 133-477

PREPARED BY CARY WHITAKER OF WHITAKER & DICKENS, POST OFFICE BOX 1129, ROANOKE RAPIDS, NORTH CAROLINA, 27870

VIRGINIA

SURRY COUNTY

THIS DEED, made this the 11th day of August, 1994, by and between Champion International Corporation, a New York corporation, hereinafter called the Grantor, and Elton Baxter Seward and Dorothy Beale Seward, his wife, as tenants by the entirety, whose address is Route 1, Box 89, Elberon, Virginia, 23846, hereinafter called the Grantees; provides as follows:

W I T N E S S E T H :

RECITALS

WHEREAS, the parties entered into an agreement to exchange properties of a like kind in a transaction that qualifies as a tax-free exchange under Section 1031 of the Internal Revenue Code of 1986, as amended; and

WHEREAS, the Grantees will acquire real properties of like kind to the property conveyed hereunder, (hereinafter called the Exchange Tracts) which it will cause to be conveyed to the Grantor in exchange for the property hereinafter described; and

WHEREAS, the owner of the Exchange Tracts will convey directly to the Grantor to minimize multiple closing costs, fees and expenses, avoid the potential liabilities associated with taking title to real estate and eliminate the expense of preparing multiple deeds hereto; and

WHEREAS, in consideration of the conveyance to it of the Exchange Tracts, the Grantor is conveying the property hereinafter described to the Grantees.

NOW, THEREFORE, the Grantor, for and in consideration of the conveyance to it of the Exchange Tracts, the receipt and sufficiency of which are hereby acknowledged, Grantor, subject to the matters described herein, hereby grants, exchanges and conveys with Special Warranty of Title unto Grantees the property described on Exhibit A attached hereto and made a part hereof.

This conveyance is made subject to all conveyances, restrictions, covenants, reservations, exceptions, conditions and easements of record insofar as they might affect the property herein conveyed;

This conveyance is made without any guarantees or warranties of any sort as to access, acreage, physical condition or suitability for any particular present or future use and is expressly subject to all covenants, reservations, exceptions, conditions, easements and restrictions as may legally affect the property herein conveyed or any part thereof, including, but not limited to, the following: (1) riparian rights of others in and to the flow of lakes, ditches, streams, creeks and rivers which cross or adjoin the property herein conveyed, (2) utility and railroad easements of record, (3) rights of way for easements of access which cross or adjoin the property herein conveyed, (4) easements for public highways which cross or adjoin the property herein conveyed, (5) drainage easements or assessments affecting

the property herein conveyed (6) cemeteries, if any, located on the property herein conveyed (7) any ordinances or regulations of a governmental agency restricting use, occupancy or zoning of the property herein conveyed, and (8) any state of facts which an accurate survey or an inspection of the property (including an environmental inspection or survey of the property herein conveyed) would reveal.

IN WITNESS WHEREOF, the Grantor has caused this deed to be executed in its name and on its behalf pursuant to due authority.

CHAMPION INTERNATIONAL CORPORATION

By: _____
Executive Vice President

ATTEST:

_____
Assistant Secretary

STATE OF CONNECTICUT

COUNTY OF FAIRFIELD, to-wit:

The foregoing instrument was acknowledged before me in the jurisdiction aforesaid, this 11th day of August, 1994, by R. L. PORTERFIELD, who is Executive Vice President of Champion International Corporation, on behalf of the corporation.

Patricia A. Matz
Notary Public

My Commission Expires:

4/30/98

EXHIBIT A

That certain tract or parcel of land situate in Blackwater Magisterial District, Surry County, Virginia and Hardy Magisterial District, Isle of Wight County, Virginia and more particularly described as follows: BEGINNING at a point at which the run of Parson (Pouches) Swamp passes under the centerline of Virginia State Route #626; thence along the centerline of Route #626 the following courses and distances to another point in said Route: S. 34° 12' 00" E. 339.90 feet, a curve to the right with a radius of 818.51 feet with a circumference of 154.53 feet, 154.76 feet in length, S. 45° 02' 00" E. 240.86 feet, a curve to the left with a radius of 2864.79 feet and a circumference of 233.27 feet, 233.33 feet in length, S. 40° 22' 00" E. 264.07 feet, and S. 41° 43' 00" E. 2072.50 feet to a point; thence the following courses and distances ending at an iron pipe at the point at which two fences intersect, S. 25° 11' 09" W. 154.71 feet to an iron pipe, S. 19° 20' 27" W. 135.15 feet to an iron pipe, S. 27° 46' 51" W. 907.16 feet to an iron pipe, S. 24° 10' 20" W. 219.95 feet to an iron pipe, S. 27° 04' 52" W. 182.28 feet to an iron pipe, S. 25° 02' 29" W. 358.74 to an iron pipe, S. 23° 09' 32" W. 189.22 feet to an iron pipe, S. 17° 59' 47" W. 289.87 feet to an iron pipe, S. 54° 05' 09" W. 271.99 feet to an iron pipe, S. 59° 36' 00" W. 129.54 feet to an iron pipe, S. 84° 53' 46" W. 119.85 feet to an iron pipe, S. 83° 44' 34" W. 61.90 feet to an iron pipe, S. 43° 12' 19" W. 220.87 feet to an iron pipe, S. 43° 12' 19" W. 297 feet to an iron pipe, S. 36° 38' 50" W. 219.87 feet to a pine tree, S. 34° 41' 10" W. 352.58 feet to an iron pipe, S. 37° 26' 49" W. 826.70 feet to a pine tree, S. 36° 36' 29" W. 350.87 feet to an iron pipe, S. 24° 22' 20" W. 216.58 feet to an iron pipe, and S. 24° 41' 44" W. 158.29 feet to an iron pipe; thence along the northern line of the property of the adjoining property owner S. 87° 36' 13" W. 804 feet to a point constituting the northeast corner of the property of the adjoining property owner; thence the following courses and distances: N. 6° 33' 17" E. 187 feet to an iron pipe, N. 8° 50' 59" W. 159.71 feet to an iron pipe; N. 8° 05' 56" W. 391.58 feet to an iron pipe; thence the following courses and distances: N. 5° 50' 36" E. 326.24 feet, N. 6° 27' 53° E. 309.86 feet, and N. 20° 37' 45" E. 380.43 feet; thence N. 88° 40' 57" E. 1123.27 feet to a point in the centerline of a ditch; thence along the centerline of said ditch the following courses and distances to a iron pipe: N. 16° 07' 38" E. 106 feet to an iron pipe, N. 16° 06' 19" E. 312.67 feet to an iron pipe; N. 30° 18' 52" W. 292 feet to an iron pipe; thence the following courses and distances to an iron pipe in or near a woods trail: N. 30° 21' 16" W. 162.28 feet to an iron pipe, N. 28° 13' 45" W. 118.17 feet to an iron pipe, N. 27° 30' 33" W. 394.89 feet to an iron pipe, N. 18° 04' 44" W. 122.84 feet to an iron pipe, N. 20° 01' 23" W. 41.60 feet to an iron pipe, N. 43° 54' 10" E. 158.12 feet to an iron

pipe, N. 36° 26' 23" E. 176.12 feet to an iron pipe; thence the following courses and distances to a point in the run of a Parson (Pouches) Swamp: N. 53° 02' 25" W. 169 feet to an iron pipe, N. 66° 02' 25" W. 112 feet to an iron pipe, N. 61° 32' 25" W. 257 feet to a point, N. 45° 02' 25" W. 108 feet to a point, and N. 87° 02' 25" W. 134 feet to a point; thence along the run of Parson (Pouches) Swamp in a northerly direction the following courses and distances to the point of beginning: N. 32° E. 179 feet, N. 1° W. 217 feet, N. 10 1/2° E. 320 feet, N. 7° W. 257 feet, N. 11 1/2° W. 193 feet, N. 49° E. 272 feet, N. 20 1/2° E. 301 feet, N. 17 1/2° W. 279 feet, N. 36° E. 278 feet, N. 42 1/2° E. 228 feet, N. 24° E. 160 feet, N. 47° E. 185 feet, N. 1 3/4° E. 236 feet, N. 16 1/4°, E. 207 feet, N. 31° E. 233 feet and N. 40 3/4° E. 300 feet, containing 298.59 acres and being a portion of parcel No. 3, said portion being all of said tract which lies on the southwest side of Virginia State Route No. 626 described in the deed from James River Company, Incorporated to Halifax Timber Company, dated February 15, 1966, recorded in Book 63, page 494, Office of the Clerk of the Circuit Court of Surry County, Virginia, and Book 182, page 369, Office of the Clerk of the Circuit Court of Isle of Wight County, Virginia; and also being the identical property reserved by Champion International Corporation in the deed from it to John Hancock Insurance Company dated _____, recorded in Book 123, Page 206, Office of the Circuit Court of Surry County, Virginia.

VIRGINIA: In the Clerk's Office of the Circuit Court of Surry County, this 9th day of Sept. 1994, at 11:16 o'clock A M, the foregoing instrument was received and, upon certificate _____ of acknowledgement thereto annexed, admitted to record. The taxes imposed by Sections 58-54 and 58-54.1 of the Code have been paid as follows

#58-54 ..... $300.00
#58-54.1 ..... $157.00

Teste: Frank V. Emmerson, Jr., Clerk
By _____ D.C.

VIRGINIA: IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF SURRY COUNTY
I CERTIFY THAT THE DOCUMENT TO WHICH THIS AUTHENTICATION IS AFFIXED IS A TRUE COPY OF A RECORD OF THE AFORESAID COURT; THAT I HAVE CUSTODY OF THE RECORD, AND THAT I AM THE CUSTODIAN OF THAT RECORD.
DATE: Sept. 9, 1994
TESTE: FRANK V. EMMERSON, JR., CLERK
BY: _____ DEPUTY CLERK

VIRGINIA
IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY
CIRCUIT COURT ON THE 9TH DAY OF
SEPTEMBER, 1994 AT 12:48PM
INSTRUMENT #940004080 WAS RECEIVED AND
UPON CERTIFICATION OF ACKNOWLEDGEMENT
THERETO ANNEXED, ADMITTED TO RECORD.
THE STATE TAX IMPOSED BY SEC. 58.1-802
OF THE VIRGINIA CODE, HAS BEEN PAID IN
THE AMOUNT OF: $43.00
STATE: $.00 LOCAL: $43.00
TESTE: WILLIAM E. LAINE JR.
(CLERK OF CIRCUIT COURT)

BY: _____ D.C.

10-04-94

132518 1 MAY 09 2013

PREPARED BY: WILLIAM H. RIDDICK, III (VSB#24217)
RIDDICK BABINEAU, PC
P. O. BOX 190
SMITHFIELD, VA 23431

Tax Map Nos. 10-01-023 & 024

THIS DEED OF BOUNDARY SETTLEMENT, made and entered into this 1ST day of April, 2013, by and between **MICHAEL A. SEWARD** and **EMILY B. SEWARD,** husband and wife, Grantor and Grantee (hereafter referred to as "Seward"), parties of the first part, whose address is 9310 Jones Drive, Smithfield, Virginia 23430, and **MARIE S. DELK** (hereafter referred to as "Delk"), a widow and not remarried, Grantor and Grantee, party of the second part, whose address is 1527 Wilkins Drive, Suffolk, Virginia 23434.

WITNESSETH:

WHEREAS, the parties of the first part and the party of the second part are the owners of two adjoining tracts of land designated on Isle of Wight County Tax Maps as Tax Map Parcel No. 10-01-023 (Seward) and No. 10-01-024 (Delk) lying on the western side of Jones Drive in the Hardy Magisterial District of the County of Isle of Wight, Virginia; and,

WHEREAS, that there exists some question as to the correct boundary line between the lands of the parties, and,

WHEREAS, the boundary lines in question are shown on a certain plat of survey entitled "WETLANDS RESERVE PROGRAM EASEMENT SURVEY NATURAL RESOURCES CONSERVATION SERVICE (NRICS) FOR MICHAEL A. & EMILY B. SEWARD", dated October 8, 2012, made by Douglas A. Richmond, Land Surveyor, a copy of which plat of survey is recorded as Plat Instrument No. 2013-28-1 in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, and which plat is made a part of this deed by reference; and,

See Plat 2013-28-1

WHEREAS, the parties of the first part and the party of the second part agree that the true and correct boundary line between their respective lands is that certain boundary line shown on the attached plat as the line beginning at a 30"gum, thence running N 87° 00' 50" W a distance of 27.86 feet along the remains of an old fence to a 12" maple; thence N 82° 35' 55" W a distance of 38.81 feet along a fence to a point; thence N 87° 02' 59" W 156.41 feet along the fence to a 20" oak; thence S 83° 31' 59" W to the center line of a stream all as shown on the plat aforesaid; and,

WHEREAS, the parties hereto further agree that from the last point mentioned in the paragraph above and running in a southwesterly direction the center line of the stream shall be the boundary line between the remainder of these two parcels although not shown on the plat aforesaid.

NOW, THEREFORE, in consideration of the premises and the sum of One Dollar, cash in hand paid, the receipt of which is hereby acknowledged by Seward, the parties of the first part do hereby agree that said line is the true and correct boundary line between the lands of the parties, and do hereby quitclaim and release unto Delk all their

right, title, and interest in and to the land lying on the south side of the aforesaid boundary line and to the south and east of the stream.

AND, in consideration of the premises and the sum of One Dollar, cash in hand paid, the receipt of which is hereby acknowledged by Delk, the party of the second part does herby agree that said line is the true and correct boundary line between the lands of the parties and does hereby quitclaim and release unto Seward all her right, title and interest in and to the land lying on the north side of the aforesaid boundary line and to the north and west of the stream.

Witness the following signatures and seals:

Michael A. Seward (SEAL)
MICHAEL A. SEWARD

Emily B. Seward (SEAL)
EMILY B. SEWARD

Marie S. Delk (SEAL)
MARIE S. DELK

STATE OF VIRGINIA
COUNTY OF ISLE OF WIGHT, to-wit:

The foregoing was acknowledged before me this 4th day of April, 2013 by Michael A. Seward and Emily B. Seward.

Notary Public

WILLIAM H. RIDDICK III NOTARY PUBLIC MY COMMISSION NUMBER 150494 COMMONWEALTH OF VIRGINIA

My commission expires: 3-31-2017

STATE OF VIRGINIA

CITY/COUNTY OF ISLE OF WIGHT, to-wit:

The foregoing was acknowledged before me this 4th day of April, 2013 by Marie S. Delk.

Notary Public

WILLIAM H. RIDDICK III NOTARY PUBLIC MY COMMISSION NUMBER 150494 COMMONWEALTH OF VIRGINIA

My commission expires: 3-31-2017

J. Riddick Robinson

INSTRUMENT #130002518
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
MAY 9, 2013 AT 10:42AM

SHARON N. JONES, CLERK
RECORDED BY: DDS

Isle of Wight, Virginia

generated on 7/29/2019 3:23:28 PM CDT

Parcel

Parcel ID	Alt. PIN	Parcel Address	AV - Tot. Lnd & Improv.	Data as of
10-01-028A	1021	9621 BURWELLS BAY RD, SMITHFIELD	$266,500	7/28/2019

Property Owner Information

Property Owner	THACKER SHELTON L & ANN
Property Owner Address	11073 MILL SWAMP RD SMITHFIELD VA 23430
Transfer Date	01/01/1977
Document No.	
Document Reference No.	250 247

Location Information

Tax Group Code	40	Routing No.	
		Legal Desc.	ADJ J B GALE PLAT 8/40
Township No.	001,		
Parcel Address	9621 BURWELLS BAY RD, SMITHFIELD		
Legal Acreage	75.2400		

Parcel Information

Property Class Code	AGR/UNDDEV 20-99 ACR
Neighborhood Code	1
Neighborhood Factor	.00
Neighborhood Type	B

Assessment Information

Current AV - Total Land	$125,200	Adj. Factor Applied	0.00
Current AV - Total Improv.	$141,300	Average AV/Acre	$0
AV - Tot. Lnd & Improv.	$266,500	Appraisal Date	9/27/2018
Reason for Change Code	19		
Prior AV - Total Land	$105,600		
Prior AV - Total Improv.	$135,900		

Ralph Wyatt Thacker, et als
TO: # 1876
Shelton L. Thacker, et al
State Tax $159.75
Local Tax $53.25

BK 257 PAGE 247

verified and delivered to
Delk and Barlow
this 30 day of Dec 19
W. E. Laine, Jr., Clerk

THIS DEED, made and entered into this the 12th., day of December, 1977, by and between RALPH WYATT THACKER and MINNIE M. THACKER, his wife, JAMES WILLIAM THACKER and ELIZABETH FRANCES THACKER, his wife, HERBERT LEE THACKER and JANETTE K. THACKER, his wife, RACHEL AMELIA THACKER JOYNER (erroneously designated in the will of her late father, Herbert M. Thacker, as "Rachel Lelia T. Joyner") and SHIRLEY JOYNER, her husband, all of the County of Isle of Wight, State of Virginia, FLORINE ANNE THACKER JOYNER, a widow, of the City of Suffolk, State of Virginia, EDWARD CROUCH THACKER and DOROTHA A. THACKER, his wife, of the County of Chesterfield, State of Virginia, FLETCHER THACKER GREENWOOD and OLIVER C. GREENWOOD, her husband, of the City of Newport News, State of Virginia, HELEN ELIZABETH THACKER JOHNSON and HERBERT NELSON JOHNSON, her husband, of the County of Surry, State of Virginia, and BETTY BENNETT THACKER DRAKE and THOMAS E. DRAKE, her husband, of the County of York, State of Virginia, by RALPH WYATT THACKER, their Attorney in Fact, of the County of Isle of Wight, State of Virginia, of the first part; and, SHELTON L. THACKER and ANNE GRIFFIN THACKER, as tenants in common, of the County of Isle of Wight, State of Virginia, of the second part:

WITNESSETH: That whereas the said parties of the first part by a certain power of attorney dated May 13, 1977, recorded on December 9, 1977, in the Clerk's Office of the Circuit Court of Isle of Wight County, designated and appointed the said Ralph Wyatt Thacker as their true and lawful Attorney for them, and in their name, place and stead, to make sale of certain real estate in Hardy Magisterial District, Isle of Wight County, Virginia, formerly owned by Herbert M. Thacker, of which the hereinafter described real estate is a part, in accordance with the procedure outlined in said power of attorney; and,

WHEREAS, pursuant to the sealed bid procedure set forth in the said power of attorney, the said Ralph Wyatt Thacker, did

DELK AND BARLOW
ATTORNEYS AT LAW
SMITHFIELD,
VIRGINIA

agree to sell the hereinafter described real estate to Shelton L. Thacker and Anne Griffin Thacker for the price and sum of One hundred six thousand five hundred ($106,500.00) Dollars, which said sum has now been paid in full by the said buyers to the said Ralph Wyatt Thacker, Attorney in Fact, and the said buyers have requested a deed for the said real estate:

NOW, THEREFORE, THIS DEED FURTHER WITNESSETH: That for and in consideration of the sum of One hundred six thousand five hundred ($106,500.00) Dollars, cash in hand paid by the said Shelton L. Thacker and Anne Griffin Thacker, as tenants in common, to the said Ralph Wyatt Thacker, Attorney in Fact as aforesaid, the said Ralph Wyatt Thacker and Minnie M. Thacker, his wife, James William Thacker and Elizabeth Frances Thacker, his wife, Herbert Lee Thacker and Janette K. Thacker, his wife, Rachel Amelia Thacker Joyner (erroneously designated in the will of her late father, Herbert M. Thacker as "Rachel Lelia T. Joyner") and Shirley Joyner, her husband, Florine Anne Thacker Joyner, a widow, Edward Crouch Thacker and Dorotha A. Thacker, his wife, Fletcher Thacker Greenwood and Oliver C. Greenwood, her husband, Helen Elizabeth Thacker Johnson and Herbert Nelson Johnson, her husband, and Betty Bennett Thacker Drake and Thomas E. Drake, her husband, by Ralph Wyatt Thacker, their duly authorized and appointed Attorney in Fact, do hereby grant, bargain, sell and convey unto the said Shelton L. Thacker and Anne Griffin Thacker, as tenants in common, with GENERAL WARRANTY and with ENGLISH COVENANTS OF TITLE, the following described real estate, to-wit:

All of that certain tract, piece or parcel of real estate, together with all rights of ways, privileges and easements appurtenant thereto or in anywise appertaining thereto, containing sixty-three (63) acres, more or less, sale being in gross and not by the acre, this conveyance being a hazard as to acreage, and situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, being bounded on the North by a tract containing 183.76 acres which was conveyed by the party of the first part to F. Perry and Son Lumber Co. Inc. by deed dated December 8, 1977, and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, on December 9, 1977, that conveyance being shown on a plat entitled "Plat Showing Property For Fermer Perry Hardy Magis.

District Isle of Wight Co. Virginia Cobham Magis. District Surry County, Virginia, Scale 1" = 200' Nov. 30, 1977, Survey by S. V. Camp, III, and Associates C.L.S. Courtland, Va. Total Area-183.76 acres" the Southern boundary of said plat forming the Northern boundary of the real estate conveyed. The real estate herein conveyed is bounded on the Southeast by Highway 621, on the Southwest by lands now or formerly of Nancy Delk Hall, and on the West by lands now or formerly of Edith Gale Beale.

Together with any and all improvements thereon, rights and privileges, tenements, hereditaments, easements and appurtenances unto the said land belonging or in anywise appertaining.

The said real estate herein conveyed being a portion of that conveyed to Herbert M. Thacker by deed dated October 14, 1943, from Jack M. Gale and Martha Delk Gale, being recorded in the Clerk's Office of the Circuit Court of Isle of Wight County in Deed Book 120, page 364, the said Herbert M. Thacker having died, testate, on September 28, 1960, and by his will probated in said Court on October 3, 1960, and recorded there in Will Book 36, page 485, the subject real estate was devised to the said James William Thacker, Herbert Lee Thacker, Rachel Amelia Thacker Joyner (being described in that will as "Rachel Lelia T. Joyner") Florine Anne Thacker Joyner, Fletcher Thacker Greenwood, Helen Elizabeth Thacker Johnson, Betty Bennett Thacker Drake, Ralph Wyatt Thacker and Edward Crouch Thacker, subject to certain rights in said real estate during the lifetime of the widow of Herbert M. Thacker, Miriam B. Thacker, the said Miriam B. Thacker having also died, testate, on September 8, 1975, and by paragraph five of her will which was probated September 30, 1975, and recorded in the Clerk's Office aforesaid in Will Book 38, page 661, she left the rest and residue of her estate, including any interest in real estate, to the same nine children mentioned above in the will of Herbert M. Thacker.

The boundary problem mentioned in the said power of attorney has since been found to actually concern not a boundary problem, but rather a timber over-cutting problem along the Northern boundary of the 183.76 acre tract referred to above, and has no effect whatsoever on the real estate herein conveyed.

This deed is executed in behalf of Ralph Wyatt Thacker and Minnie M. Thacker, his wife, James William Thacker and Elizabeth Frances Thacker, his wife, Herbert Lee Thacker and Janette K. Thacker, his wife, Rachel Amelia Thacker Joyner (erroneously designated in the will of her late father, Herbert M. Thacker as "Rachel Lelia T. Joyner) and Shirley Joyner, her husband, Florine Anne Thacker Joyner, a widow, Edward Crouch Thacker and Dorotha A. Thacker, his wife, Fletcher Thacker Greenwood and Oliver C. Greenwood, her husband, Helen Elizabeth Thacker Johnson and Herbert Nelson Johnson,

her husband, by Ralph Wyatt Thacker, their Attorney in Fact, pursuant to the authority vested in him by a certain power of attorney dated May 13, 1977, and recorded in the Clerk's Office aforesaid on December 9, 1977.

The parties of the first part hereby reserve possession of the real estate herein conveyed until January 1, 1978.

Witness the following signatures and seal:

RALPH WYATT THACKER, MINNIE M. THACKER, JAMES WILLIAM THACKER, ELIZABETH FRANCES THACKER, HERBERT LEE THACKER, JANETTE K. THACKER, RACHEL AMELIA THACKER JOYNER, SHIRLEY JOYNER, FLORINE ANNE THACKER JOYNER, EDWARD CROUCH THACKER, DOROTHA A. THACKER, FLETCHER THACKER GREENWOOD, OLIVER C. GREENWOOD, HELEN ELIZABETH THACKER JOYNSON, HERBERT NELSON JOHNSON, BETTY BENNETT THACKER DRAKE, THOMAS E. DRAKE

By Ralph Wyatt Thacker (SEAL)
Ralph Wyatt Thacker, Their Attorney in Fact

STATE OF VIRGINIA,

COUNTY OF ISLE OF WIGHT, to-wit:

The foregoing instrument was acknowledged before me this 12th., day of December, 1977, by Ralph Wyatt Thacker, Attorney in Fact for Ralph Wyatt Thacker, Minnie M. Thacker, James William Thacker, Elizabeth Frances Thacker, Herbert Lee Thacker, Janette K. Thacker, Rachel Amelia Thacker Joyner, Shirley Joyner, Florine Anne Thacker Joyner, Edward Crouch Thacker, Dorotha A. Thacker, Fletcher Thacker Greenwood, Oliver C. Greenwood, Helen Elizabeth Thacker Johnson, Herbert Nelson Johnson, Betty Bennett Thacker Drake and Thomas E. Drake.

My commission expires July 1, 1981

Joyce R. Fells
Notary Public

VIRGINIA: Clerk's Office of the Circuit Court of the County of Isle of Wight, December 14, 1977, at 9:00 o'clock A.M., this ... was received and with the certificate annexed, admitted to record.
TAX ($ 10.50) imposed by Section 58.61 has been paid.
TESTE: W. E. Laine, Jr. CLERK. By: Kathryn K. Wills D. C.

150003160

PG 04 AUG.05.2015

153160

This Document was prepared by:
Clinton B. Faison, Jr.
Attorney at Law
P. O. Box 186
Surry, Virginia 23883
(757) 294-3000
VSB #17728
Tax Map# 10-01-025
Consideration: $320,000.00
Assessment: ~~$62,100.00~~ $428,900.00

THIS DEED OF BARGAIN AND SALE, made this 30th day of July, 2015 by and between **NANCY DELK HALL**, party of the first part and hereinafter styled "**Grantor**", and **JEAN E. BARCROFT, SOLE TRUSTEE, OR HER SUCCESSORS IN TRUST, UNDER THE JEAN E. BARCROFT LIVING TRUST DATED MAY 28, 1996**, and any Amendments thereto, of 11470 Modest Neck Road, Ivor, Virginia 23866, party of the second part and hereinafter styled "**Grantee**".

W I T N E S S E T H : That for and in consideration of the sum of **TEN DOLLARS ($10.00)** and other good and valuable consideration, cash in hand paid, the receipt of which is hereby acknowledged, at and before the signing, sealing and delivery of this Deed, the Grantor does hereby bargain, sell, grant and convey unto the Grantee, with **GENERAL WARRANTY** and with **ENGLISH COVENANTS of Title**, the following described real estate, together with the buildings and improvements thereon and the appurtenances thereunto belonging, if any, to-wit:

SEE PROPERTY DESCRIPTION ATTACHD

12-4/15

This conveyance is made **SUBJECT** to all restrictions, reservations, easements, covenants, and conditions as are contained in instruments forming the chain of title to said property, or as may be apparent from a careful inspection of the premises.

TO HAVE AND TO HOLD the said property by the Trustee, Jean E. Barcroft, for the purposes set forth herein under her said Living Trust, and with the following rights, powers and privileges, in accordance with Section 55-17.1 of the Code of Virginia, as amended:

1. Trustee, including any Successor Trustee, according to the terms of the trust shall have the power to sell, lease, encumber or otherwise dispose of the property herein described.

2. No one dealing with the Trustee, including any Successor Trustee, shall be required to make further inquiry as to the right of such Trustee to act.

3. No one dealing with the Trustee, including any Successor Trustee, shall inquire as to the disposition of any proceeds.

WITNESS the following signature and seal:

Nancy Delk Hall (SEAL)

STATE OF VIRGINIA
COUNTY OF SURRY, to-wit:

The foregoing instrument was acknowledged before me this 30th day of July, 2015, by Nancy Delk Hall.

My Commission expires: 7/31/18.

Notary Public

PAMELA B. OWNEY
Notary Public
Commonwealth of Virginia
No. 172412
My Commission Expires 7/31/18

TO:
Riddick Babineau

PROPERTY DESCRIPTION

"All of that certain tract, piece or parcel of land, situate, lying and being in Hardy Magisterial District, Isle of Wight County, Virginia, known as the Crouch tract, containing 125.85 acres according to a survey thereof made on March 15, 1943, by Roy Brinkley surveyor, a plat of said survey being duly of record in the Clerk's Office hereinafter mention in Plat Book 2, at page 242, the said tract of land being bounded and described, with reference to the said plat of survey as follows: Beginning at an iron pin on the Northeast side of the highway leading from Delk's Crossroad to the Burwell's Bay road near a branch, and running thence S. 28° E. 532 feet to a point; thence S. 45° E. 060 feet to a point; thence S. 80° E. 1300 feet to a point on the Eastern side of Burwell's Bay road; thence S. 79° 30' E. 505 feet to a pine; thence 79° E. 487 feet to a pine; thence S. 80° 30' E. 252 feet to an oak; thence S. 80° 15' E. 361 feet to a point; thence S. 86° E. 100 feet to a pine; thence S. 89° E. 095 feet to a pine; thence S. 89° 30' E. 105 feet to a pine; thence N. 86° E. 111 feet to an iron pin, a corner; thence running N. 31° 15' E. 371 feet to a gum; thence N. 26° E. 098 feet to a maple; thence N. 22° E. 154 to a pine; thence N. 19° 30' E. 240 feet to a pine; thence N. 36° 30' E. 252 feet to a gum; thence N. 45° E. 093 feet to a gum; thence N. 40° E. 251 feet to a gum; thence N. 21° 30' E. 098 feet to a gum; thence N. 14° E. 101 .eet to a B. gum, a corner; thence running N. 80° W. 707 feet to a maple; thence N. 81° W. 115 to a pine; thence N. 73° 30' W. 417 feet to a pine; thence N. 59° W. 135 feet to a pine; thence N. 55° 30' W. 200 feet to gum on the Eastern side of the Burwell's Bay road in a branch; thence following said branch across the said Burwell's Bay road, the run of the said branch being the property line N. 56° W. 120 feet to a point; thence N. 58° 30' W. 163 feet to a point; thence S. 78° W. 173 feet to a point; thence S. 71° 15' W. 152 feet to a point; thence S. 39° W. 154 feet to a point; thence S. 61° 15' W. 153 feet to a point; thence S. 80° W. 100 feet to a point; thence S. 51° 30' W. 155 feet to a point; thence W. 176 feet to a point; thence N. 76° W. 164 feet to a point; thence S. 78° W. 125 feet to a point; thence N. 69° W. 140 feet to a point in the intersection of the said branch with another branch; thence running up and along the last mentioned branch N. 24° E. 074 feet to an iron pin, a corner; thence leaving the said branch and running N. 88° W. 212 feet to a gum; thence N. 84° W. 186 feet along a fence to an oak; thence continuing along the said fence W. 350 feet to an iron pin, a corner; thence running S. 2° W. 380 feet across a branch to a gum; thence S. 17° 30' W. 261 feet to a pine at a wire fence; thence following the said wire fence S. 68° W. 366 feet to a pine stump; and thence S. 82° W. 151 feet to the iron

pin an the point of beginning, the said tract of land lying on both sides of said Burwell's Bay road."

LESS, SAVE and **EXCEPT**, a small triangular shaped portion of the said tract of land conveyed to Earl T. Hall by deed from Alfred M. Delk, et ux., dated April 19, 1957, and recorded in the Clerk's Office aforesaid in Deed Book 151, at page 226.

LESS, SAVE and **EXCEPT**, that certain lot, piece or parcel of land containing 1.332 acres conveyed to Richard B. Norman and Patricia S. Norman, by deed dated December 1, 1975 recorded in Deed Book 235, at page 704; and,

LESS, SAVE and **EXCEPT**, that certain lot, piece or parcel of land containing 2.55 acres conveyed to Roger Dean Atkins, by deed dated May 10, 1999 recorded as Instrument No. 000004425.

BEING a portion of the same property devised unto Alfred M. Delk by Will of Thomas H. Delk of record in the Clerk's Office of the Circuit Court of Isle of Wight County in Will Book 36, at page 79. Alfred M. Delk died intestate on February 13, 1959 seized and possessed of the above property and his sole heirs at law were his widow, Gladys G. Delk, and his two (2) children, Dan G. Delk and Nancy Delk Hall. Dan G. Delk, et ux conveyed his one-half interest in the aforesaid property to Nancy Delk Hall by deed dated September 25, 1963 and recorded in the aforesaid Clerk's Office in Deed Book 172, at page 243. The dower interest of Gladys G. Delk terminated upon her death on November 18, 1993 and at her death she was known as Gladys G. Seward.

Together with all and singular the buildings and improvements, thereon, the rights and privileges, tenements, hereditaments, easements and appurtenances unto the said land belonging or in anywise appertaining.

(155-0312)
Return To: Riddick Babineau, PC
Post Office Box 190
Smithfield, VA 23431

INSTRUMENT #150003160
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
AUGUST 5, 2015 AT 10:45AM
$429.00 GRANTOR TAX WAS PAID AS
REQUIRED BY SEC 58.1-802 OF THE VA. CODE
STATE: $214.50 LOCAL: $214.50

SHARON N. JONES, CLERK
RECORDED BY: KST

141864 8 JUN. 03 2014

EXEMPT from recordation taxes pursuant to Virginia Code, 1950, as amended, Section 58.1-811-D

Jane Delk Batten, widowed and un-remarried
Trust Settlor and
Mitchell Delk Batten, as Trustee of the Jane Delk Batten Revocable Trust u/a/d March 18, 2005
Grantor

to DEED OF GIFT

Mitchell Delk Batten, as sole owner
11231 Mill Swamp Road
Smithfield, Virginia 23430
Grantee

THIS DEED OF GIFT, made this 20th day of May, 2014, by, between and among Jane Delk Batten, widowed and un-remarried, Trust Settlor and Mitchell Delk Batten, as Trustee of the Jane Delk Batten Revocable Trust u/a/d March 18, 2005 Grantor, and Mitchell Delk Batten, as sole owner, Grantee,

WITNESSETH:

That for and in consideration of the love and affection of Jane Delk Batten for Mitchell Delk Batten, and for no other consideration of any kind, the said Grantor does grant and convey unto the said Mitchell Delk Batten, as sole owner, with General Warranty, and the English covenants of title, the following property, to-wit:

PARCEL 1: ALL of that certain tract, piece or parcel of land situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia , standing on the 1978 Land Book in the Clerk's Office of the Circuit Court of said County as two parcels, of 211.911 acres and 2.30 acres, conveyance being in gross and not by the acre, there being a hazard as to acreage, said land being bounded by lands of Union Camp Corporation, Lawrence C. Thacker, Melvin Gwaltney, estate of Horace D. Gwaltney, estate of Nancy Cofer Batten, estate of Effie P. Batten, Frank Batten, and others; said land

Prepared by:
C. Arthur Robinson, II
VSB #25016
Wolcott Rivers Gates
301 Bendix Road, Suite 500
Virginia Beach, VA 23452
(757) 497-6663

lies on both sides of Route 626, being all of the land of which T.P. Batten died siezed and possessed, and is the major portion of the land which was conveyed by T.A. Batten to T.P. Batten, by deed dated September 20, 1932, of record in the Clerk's Office of the Circuit Court of Isle of Wight county, Virginia in Deed Book 107, page 296; said T.P. Batten, also known as T.P. Batten, Sr., by his last will and testament, probated in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia on April 25, 1977 devised his said real estate to his son, T.P. Batten, Jr.

LESS, SAVE and EXCEPT the following outconveyances made by Deeds executed by T.P. Batten, Jr., et ux: (1) 14.70 acres, more or less, conveyed to Virginia Electric and Power Company, a Virginia Corporation, by Deed dated November 29, 1979 and recorded in the aforesaid Clerk's Office in Deed Book 266, at page 188; (2) 10.122 acres conveyed unto M. Delk Batten, et ux, by Deed dated December 7, 1984 and recorded in the aforesaid Clerk's Office in Deed Book 301, at page 352; (3) 6.60 acres conveyed unto Mitchell Delk Batten, et ux, by Deed dated June 21, 1989 and recorded in the aforesaid Clerk's Office in Deed Book 357, at page 129; and (4) 4.688 acres conveyed unto T.P. Batten, Jr., et ux, by Deed dated August 21, 1991 and recorded in the aforesaid Clerk's Office in Deed Book 386, at page 534.

It being the same property conveyed to T.P. Batten, by Deed from T.A. Batten, dated 9/20/32, recorded 2/23/35, in Deed Book 107, page 296. The said Tazewell Petron Batten, Jr. having departed this life 6/23/98, testate, the property passed to Jane Delk Batten, his wife (reference WB 47, page 817).

Tax Parcel No. 11-01-015

PARCEL 2: All of that certain lot, piece or parcel of land situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, containing 10.122 acres by survey and shown on a certain plat of survey entitled, "MAP SHOWING PROPERTY TO BE CONVEYED TO M. DELK BATTEN BY T.P. BATTEN, JR., LOCATED IN HARDY MAG. DIST., ISLE OF WIGHT CO., VA., SCALE: 1" = 200;, SEPT. 15, 1984, SURVEYED BY S.V. CAMP, III AND ASSOCIATES, CERTIFIED LAND SURVEYOR, COURTLAND, VA.", which plat is recorded in the Clerk's Office of the Circuit Court of Isle of Wight County in Plat Book 12, at page 81 and which is incorporated herein by reference. Specifically conveyed herewith is a perpetual easement over a forty foot (40') private road for ingress and egress to said property from State Route 626, all as shown on said plat.

It being the same property conveyed to T.P. Batten, Jr. and Jane Delk Batten, husband and wife, tenants in common, by deed from M. Delk Batten, dated 8/4/92, recorded 8/11/92, in Deed Book 401, page 508. The said Tazewell

Petron Batten, Jr. having departed this life 6/23/98, testate, the property passed to Jane Delk Batten, his wife (reference WB 47, page 817).

Tax Parcel No. 11-01-015B & E

PARCEL 3: All that certain lot, piece or parcel of land, situate, lying and being in Hardy Magisterial District, Isle of Wight County, Virginia, containing 4.688 acres as shown on that certain plat of survey entitled, "SURVEY OF 4.688 AC. PORTION OF THE T.P. BATTEN JR. PROPERTY CONVEYING TO: T.P. BATTEN, JR. AND JANE D. BATTEN" made by J.R. Stainback, III, C.L.S., dated June 12, 1991, Scale: 1 = 200', which plat is attached hereto and recorded herewith in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, reference to which plat is here made for a more particular description of the property.

Together with all and singular the buildings and improvements, if any, thereon, rights and privileges, tenements, hereditaments, rights of way, easements and appurtenances unto the said land belonging or in anywise appertaining.

It being the same property conveyed to T.P. Batten, Jr. and Jane Delk Batten, husband and wife, tenants by the entirety, by deed from T.P. Batten, Jr. and Jane D. Batten, dated 8/21/91, recorded 8/23/91, in Deed Book 386, page 535. The said Tazewell Petron Batten, Jr. having departed this life 6/23/98, testate, the property passed to Jane Delk Batten, his wife (reference WB 47, page 817).

Tax Parcel No. 11-01-015G

Parcels 1-3 were conveyed to the Grantor by deed of transfer dated March 18, 2005 and recorded in the records of the Isle of Wight County Circuit Court Clerk's Office as instrument no. 050002230

This conveyance is subject to all the conditions, restrictions, easements and reservations of record, if any, affecting the aforesaid real property and thereby constituting constructive notice thereof.

WITNESS the following signature and seal:

The Jane Delk Batten Revocable Living Trust
u/a/d March 18, 2005

Jane Delk Batten (SEAL)
Jane Delk Batten, Settlor

Mitchell Delk Batten (SEAL)
Mitchell Delk Batten, Trustee

STATE OF VIRGINIA
AT-LARGE, to-wit:

I, Lauren P. Harper, a Notary Public in and for the State aforesaid do hereby certify that Jane Delk Batten whose name is signed to the foregoing writing, bearing date of the 20th day of May, 2014, has acknowledged the same before me in my State aforesaid.

Given under my hand this 20th day of May, 2014.

Lauren P. Harper
Notary Public

My Commission Expires: 1/31/16
Registration No. 290148

STATE OF VIRGINIA
AT-LARGE, to-wit:

I, Lauren P. Harper, a Notary Public in and for the State aforesaid do hereby certify that Mitchell Delk Batten whose name is signed to the foregoing writing, bearing date of the 20th day of May, 2014, has acknowledged the same before me in my State aforesaid.

Given under my hand this 20th day of May, 2014.

Lauren P. Harper
Notary Public

My Commission Expires: 1/31/16
Registration No. 290148

INST 140001864
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
JUNE 3, 2014 AT 12:11PM
SHARON N. JONES, CLERK
RECORDED BY: DDS

To Wolcott Rivers .... Attys

131601 22 MAR 22 2013

THIS GIFT DEED IS EXEMPT FROM RECORDATION TAX PURSUANT TO VIRGINIA CODE § 58.1-811(D)

CONSIDERATION: $ -0-

GRANTEE'S ADDRESS: 9172 Green Level Road
Ivor, VA 23866

THIS INSTRUMENT PREPARED BY: WILLIAM H. RIDDICK, III (VSB#24217)
RIDDICK BABINEAU, PC
P. O. BOX 190
SMITHFIELD, VA 23431

TAX MAP # 18-01-033, 18-01-032, 17-01-010, 17-01-010A, 17-01-019, 27-01-023, 16-01-003, 17-01-024, 17-01-025, 17-01-003, 17-01-003B

THIS DEED WAS PREPARED WITHOUT THE BENEFIT OF A TITLE EXAMINATION.

THE EXISTENCE OF TITLE INSURANCE IS UNKNOWN TO THE PREPARER.

THIS DEED OF GIFT made and entered into this 25th day of February, , 2013, by and between **MILDRED C. RAMSEY, TRUSTEE UNDER THE JOHN A. RAMSEY, JR., SECOND AMENDED AND RESTATED REVOCABLE TRUST AGREEMENT DATED SEPTEMBER 12, 2005**, hereinafter called Grantor, party of the first part; and **DAWN TO DUSK, LLC**, a Virginia limited liability company, Grantee, party of the second part,

WITNESSETH:

That in distribution of trust property and for no monetary consideration, the Grantor, as the trustee under the John A. Ramsey, Jr., Second Amended and Restated Revocable Trust Agreement Dated September 12, 2005, does give, grant and convey with SPECIAL WARRANTY OF TITLE unto DAWN TO DUSK LLC, a Virginia limited liability company, the following described property held by said trust:

FIRST: "Tract No. 1: All of that certain tract, piece or parcel of land situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, containing Four Hundred Eighty Six and two-tenths (486.2) acres, according to a survey made by R. E. Barlow, Surveyor, a plat of which is dated January 9, 1944, and of record in Plat Book 2, page 202, in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, and according to said plat of survey is bounded and described as follows, to-wit: Beginning at a point where a branch crosses secondary road number 680, known as "Greenlevel Road", and running thence down and along said Road, S. 62° 00' E. 1057.0 feet to a point in another branch; thence S. 9° 30' E. 286.5 feet to a pine; thence S. 26° 45' E. 101.5 feet to a gum; thence S. 57° 45' E. 236.5 feet to a gum; thence S. 11° 45' E. 190.0 feet to a gum; thence S. 75° 00' E. 167.0 feet to a gum; thence S. 25° 00' E,. 174.0 feet to a gum; thence S. 24° 30' E. 149.0 feet to a gum; thence S. 45° 45' E. 186.0 feet to a pine; thence S. 27° 00' E. 136.5 feet to a gum; thence S. 28° 00' E. 128.5 feet to a gum; thence S. 61° 15' E. 162.5 feet to a gum; thence S. 30° 15' E. 157.0 feet to a gum; thence S. 12° 15' W. 114.5 feet to a pine; thence S. 40° 00' W. 100.0 feet to a gum; thence S. 18° 30' W. 114.5 feet to a pine; thence S. 10° 30' W. 129.0 feet to a pine; thence S. 6° 30' E. 168.0 feet to a gum; thence S. 1° 30' W. 169.5 feet to a gum; thence S. 9° 45' E. 161.0 feet to a poplar; thence S. 14° 15' E. 265.0 feet to a maple; thence S. 16° 15' W. 152.0 feet to an oak; thence S. 33° 00' W. 137.0 feet to a gum; thence S. 20° 00' W. 164.0 feet to a gum; thence S. 19° 45' W. 152.5 feet to a

130001601
Rec: 3/22/2013

hornbeam; thence S. 45° 45' W. 211.0 feet to a gum; thence S. 36° 00' W. 101.5 feet to a gum; thence S. 61° 00' W. 155.0 feet to a gum; thence S. 21° 15' E. 133.0 feet to a gum; thence S. 40° 30' E. 122.5 feet to a gum; thence S. 1° 15' W. 61.0 feet to a cypress; thence N. 77° 15' W. 161.5 feet to a gum; thence N. 61° 15' W. 217.0 feet to a gum; thence N. 27° 45' W. 234.0 feet to a gum; thence S. 89° 15' W. 193.0 feet to a gum; thence S. 45° 15' W. 159.0 feet to a cypress; thence S. 57° 30' W. 339.0 feet to a cypress; thence S. 45° 15' W. 150.0 feet to a gum; thence S. 31° 15' W. 94.0 feet to a gum; thence S. 83° 30' W. 148.0 feet to a point; thence S. 86° 00' W. 29.5 feet to a gum; thence S. 48° 45' W. 132.0 feet to a gum; thence S. 27° 45' W. 217.0 feet to a point; thence S. 5° 30' W. 101.5 feet to a point; thence S. 35° 30' W. 188.0 feet to a gum; thence S. 23° 45' W. 284.0 feet to a bridge on secondary road number 683; thence continuing down and along said branch, S. 25° 45' W. 237.0 feet to a gum; thence S. 68° 30' W. 198.0 feet to a cypress; thence N. 87° 45' W. 219.5 feet to a gum; thence S. 51° 15' W. 206.0 feet to a gum; thence S. 67° 15' W. 160.0 feet to a gum; thence N. 81° 00' W. 236.0 feet to a gum; thence N. 83° 15' W. 128.5 feet to a gum; thence S. 52° 45' W. 246.5 feet to a gum; thence S. 1° 30' W. 130.5 feet to a gum; thence S. 57° 45' W. 198.0 feet to a gum; thence N. 56° 15' W. 187.0 feet to a gum; thence N. 57° 45' W. 250.0 feet to a gum; thence S. 84° 00' W. 225.0 feet to a gum; thence leaving said branch and running N. 27° 15' W. 139.5 feet to an oak; thence N. 25° 30' W. 264.5 feet to a gum; thence N. 26° 00' W. 178.5 feet to a gum; thence N. 34° 30' W. 185.0 feet to an oak; thence S. 83° 00' E. 274.0 feet to a gum; thence S. 86° 15' E. 108.0 feet to an oak; thence S. 87° 15' E. 203.5 feet to a gum; thence S. 89° 15' E. 113.5 feet to a gum; thence N. 1° 15' W. 252.5 feet to a beech; thence N. 35° 15' W. 215.5 feet to an oak; thence N. 22° 30' W. 350.0 feet to a gum; thence N. 13° 45' W. 46.0 feet to a pine; thence N. 32° 15' W. 200.5 feet to a pine; thence N. 18° 15' W. 214.5 feet to a point in the center of secondary road number 629; thence N. 20° 30' E. 111.5 feet to a gum; thence N. 29° 30' E. 134.5 feet to a gum; thence N. 32° 45' E. 255.5 feet to a hickory; thence N. 3° 45' W. 663.0 feet to a gum; thence N. 25° 15' W. 587.5 feet to a gum; thence N. 30° 30' W. 113.5 feet to a gum; thence N. 37° 30' W, 59.5 feet to a pine; thence N. 40° 00' W. 84.0 feet to a pine; thence N. 33° 00' W. 135.5 feet to a gum near the head of a branch; thence down and along said branch N. 42° 45' W. 104.5 feet to a pine; thence N. 47° 30' W. 87.5 feet to a gum; thence N. 35° 30' W. 90.0 feet to a gum; thence N. 28° 15' W. 124.0 feet to a beech; thence N. 17° 30' W. 166.5 feet to a gum; thence N. 2° 15' W. 214.5 feet to a gum; thence N. 14° 45' W. 114.5 feet to a poplar; thence N. 47° 30' W. 175.5 feet to a gum; thence N. 40° 00' W. 165.5 feet to a gum; thence N. 40° 45' W. 133.5 feet to a gum; thence N. 40° 45' W. 101.0 feet to a gum; thence N. 33° 30' E. 157.5 feet to a gum; thence N. 33° 00' E. 162.5 feet to a gum; thence N. 9° 45' E. 193.0 feet to a gum; thence N. 21° 15' E. 145.0 feet to a gum; thence S. 66° 30' E. 120.5 feet to a maple; thence N. 75° 15' E. 121.0 feet to a poplar; thence N. 79° 00' E. 266.5 feet to a gum; thence S. 88° 15' E. 138.5 feet to an ash; thence N. 53° 00' E. 166.0 feet to a gum; thence N. 78° 30' E. 250.5 feet to a gum; thence S. 88° 15' E. 202.0 feet to an ash; thence S. 86° 45' E. 190.0 feet to a gum; thence S. 70° 30' E. 176.0 feet to a gum; thence S. 61° 30' E. 196.0 feet to a gum; thence S. 57° 15' E. 167.5 feet to a gum; thence S. 76° 30' E. 204.0 feet to a gum; thence N. 83° 00' E. 187.5 feet to a gum; thence N. 84° 45' E. 219.0 feet to a gum; thence N. 77° 15' E. 155.0 feet to a gum; thence N. 67° 30' E. 152.0 feet to a gum; thence N. 54° 30' E. 170.0 feet to a gum; thence N. 51° 30' E. 144.5 feet to a gum; thence N. 48° 30' E. 312.0 feet to a point where said branch crosses said secondary road number 680, the point of beginning; it being the same tract of land conveyed to W. H. Gale by deed from Hunter G. Barlow, et ux., dated the 2nd day of January, 1939, and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight in Deed Book 115, at page 66.

"Tract No. 2: All of that certain tract, piece or parcel of land situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, contiguous to Tract No. 1 above described, containing Eleven and one-half (11-1/2) acres, more or less, according to a survey thereof made by Roy Brinkley, dated November 11, 1948, a plat of said survey, styled "Plat Showing Property of R. M.

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Carroll to W. H. Gale, near Ponds, Virginia, Isle of Wight County", being of record in Plat Book 3, page 64 in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, to which said plat reference is hereby specifically made, said tract of land being bounded and described, according to said plat, as follows, to-wit: Beginning at an oak tree on the southern side of the secondary road known as the Greenlevel Road and running thence down and along said road N. 61° W. 816 feet to a culvert; thence N. 43° W. 155 feet to a point; thence N. 35° W. 600 feet to a stob; thence leaving said road and running N. 54° E. 436 feet to a gum in a swamp; thence following the run of said swamp S. 26° 15' E. 120 feet to a point; thence S. 45° E. 186 feet to a point; thence S. 23° 45' E. 149 feet to a point; thence S. 24° 15' E. 174 feet to a point; thence S. 74° 15' E. 167 feet to a point; thence S. 11° E. 190 feet to a point; thence S. 57° E. 236.5 feet to a point; thence S. 26° E. 101.5 feet to a point at the head of said swamp; thence S. 8° 15' E. 286.5 feet to the oak first herein mentioned, the point of beginning; it being the same tract, piece or parcel of land conveyed to W. H. Gale by R. M. Carroll, a widower, by deed dated the 1st day of December, 1948 and of record in Deed Book 130, at page 587, in the Clerk's Office aforesaid.

"SAVE AND EXCEPT, that tract containing approximately 1-1/2 acres, including the main dwelling house of Green Level Farm, conveyed by deed dated February 25, 1958 from John A. Ramsey, et als., to John A. Ramsey, Jr., and Mildred Corvin Ramsey, husband and wife, respectively, as tenants by the entirety with survivorship as at common law, recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, in Deed Book 153, page 478, and, SAVE AND EXCEPT, two very small tracts conveyed from John A. Ramsey, et als., to the Commonwealth of Virginia, one being dated July 23, 1960, recorded in the Clerk's Office aforesaid in Deed Book 160, page 22 (to improve Highway 683), and a second dated July 22, 1964, recorded in said Clerk's Office in Deed Book 176, page 16 (to improve Highway 623)."

Tax map 18-01-034

" Except for the conveyances excepted above, the real estate herein conveyed is the same in all respects as that conveyed to John A. Ramsey, William C. Ramsey and John A. Ramsey, Jr., by deed dated December 1, 1956 from George a. Mumford and National Bank of Commerce, Norfolk, Virginia, Executors and Trustees of the Estate of W. H. Gale and of record in the Clerk's Office of the Circuit Court of Isle of Wight County, in Deed Book 150, page 145. (Although said deed does not expressly state this, the said John A. Ramsey owned a one-half (½) undivided interest in said real estate and the said William C. Ramsey and John A. Ramsey, Jr., a one-fourth (1/4) undivided interest each.) The said John A. Ramsey, by his will probated on December 22, 1967, and recorded in said Clerk's Office in Will Book 37, page 425, devised half of his half interest in said Green Level Farm to his wife, the said Nell Cobb Ramsey, (a 5/20 undivided interest), and the other half in equal shares, (1/20 undivided interest each), to his five children named therein, as follows, William Cobb Ramsey, John Augustus Ramsey, Jr., Nell Cobb Ramsey Smither, Edna Elizabeth Ramsey Hutter, and Robert Francis Ramsey." The said Nell Cobb Ramsey, William Cobb Ramsey and wife, Nell Cobb Ramsey Smither and husband, Edna Elizabeth Ramsey Hutter and husband and Robert Francis Ramsey conveyed all of their interests in said property to John A. Ramsey, Jr. by deed dated September 1, 1975 and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia in Deed Book 234, page 205.

SECOND: " All of that certain tract, piece, or parcel of real estate situate, lying, and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, originally containing three hundred and forty-one acres, more or less, (341 ±), sale and conveyance in gross and not by the acre, and is bounded on the N. by the road leading from Smithfield to Sycamore Cross, on the E. by the road leading from last mentioned road to Raynor, on the S. by the lands now or formerly of C. H. Nurney and A. H. Holleman, and on the W. by the lands now or formerly of A H. Holleman. This said tract or parcel of land consists of two contiguous tracts, one containing

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two hundred ninety-six (296) acres, more or less, known as the "Home Place of E. B. Ramsey, deceased". (This acreage being erroneously stated as two hundred sixty-nine (269) acres rather than two hundred ninety-six (296) acres in paragraph one of the deed dated March 4, 1947, from Charlie M. Ramsey and Nellie H. Ramsey to John A. Ramsey, Jr., and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County in Deed Book 127, page 151.) and the other containing forty-five (45) acres, more or less, and is known as "Rock Bottom", SAVE AND EXCEPT two lots previously conveyed, each containing 1.00 acres, deed to each being recorded in the office of the Clerk of the Circuit Court of Isle of Wight County, both being from Robert F. Ramsey, one being dated October 11, 1989 to Florence Jean Wells and Michael Earl Edwards, recorded in Deed Book 361, page 305, and the other being dated March 20, 1990 to Doris L. Jones recorded in Deed Book 370, page 359.

It being the same property which was conveyed to John A. Ramsey, Jr. by Robert F. Ramsey, unmarried, by deed dated January 12, 1993 and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia in Deed Book 409, page 616.

THIRD: "All of that certain tract, piece or parcel of land situate in Hardy Magisterial District, County of Isle of Wight, State aforesaid, that lies on the south side of the secondary road leading from old Raynor Post Office to the Mill Swamp road and on the west side of the secondary road leading from the last mentioned road to the location of Old Rattlesnake Swamp Bridge, consisting of approximately 53 acres, and is bounded on the north by said Raynor-Mill Swamp road, on the east and south by said Old Rattlesnake Bridge road and on the west by John Paul Jones.

It being the same property which was conveyed to John A. Ramsey, Jr. by Nancy Ramsey Boush, unmarried, Marjorie Lee Ramsey Magette and James B. Magette, her husband, by deed dated February 3, 1984 and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia in Deed Book 296, page 552.

FOURTH: "All of that certain tract, piece or parcel of land situate, lying and being at Sycamore Cross, Hardy Magisterial District, County and State aforesaid, generally known and referred to as the "John A. Ramsey, Sr. Home Place", containing 401 acres, more or less, conveyance in gross and not by the acre, being a hazard as to acreage, and which adjoins the highway leading from Sycamore Cross to Ivor, the highway leading from Sycamore Cross to Surry, the lands now or formerly of W. Guy Betts, William Bell, P.D. Gwaltney, III, and others. It being a part of the real estate of which the said John A. Ramsey, Sr., died seized and possessed and the same devised by Edna R. Ramsey, deceased, by her last will and testament dated the 24th. day of March, 1953, and in Will Book 36, at page 132, to the said Eugenia Ramsey Myers, and released and quitclaimed unto the said Eugenia Ramsey Myers by certain deed of release and quitclaim dated the 1st. day of January, 1955, from Louise R. White Lane, et als., and recorded in the Clerk's Office of the County aforesaid, in Release Deed Book 4, page 376."

It being the same property in which John A. Ramsey, Jr. acquired a one-half interest by deed from W. M. Myers and others, dated January 13, 1981 and recorded in said Clerk's Office in Deed Book 217, page 835 and the remaining one-half interest by Deed of Partition and Exchange (Parcel Eight) between John A. Ramsey, Jr. and others, dated June 15, 2005, and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia as Instrument No. 058440, page 189, on November 14, 2005.

FIFTH: "All of that certain tract, piece or parcel of land situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, containing ninety (90) acres (formerly standing on the Land Books of said County as

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ninety-nine (99) acres) more or less, sale and conveyance in gross and not by the acre, known as the Wilson and White Places and is bounded on the North by the highway leading from Sycamore Cross to Smithfield, on the East by lands now or formerly of Gwaltney White, on the South by the lands now or formerly of Charlie M. Ramsey, and on the West by the road leading from the highway above mentioned to Raynor. This conveyance is made subject to a certain easement for the construction, operation and maintenance of a subterranean telephone and telegraph line now or formerly belonging to the American Telephone and Telegraph Company of Virginia. SAVE AND EXCEPT, that lot conveyed by the late John A. Ramsey, et ux., to the said William C. Ramsey, party of the second part, by deed dated October 7, 1954 and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, in Deed Book 143, page 569, together with a 20 foot wide easement from said lot (on which lot the residence of the said William C. Ramsey is located) to Highway 621, and SAVE AND EXCEPT, that tract containing approximately 4 acres (on which the Peanut Buying Station is now located) conveyed by the late John A. Ramsey, et ux., to John A. Ramsey, William C. Ramsey, and John A. Ramsey, Jr., Partners trading as John A. Ramsey and Sons, by deed dated September 20, 1967, and of record in the Clerk's Office aforesaid in Deed Book 189, page 459."

It being the same property which was conveyed to John A. Ramsey, Jr. by Deed of Partition and Exchange (Parcel Nine) between John A. Ramsey, Jr. and others dated June 15, 2005 and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, as Instrument No. 058440 page 189, on November 14, 2005.

SIXTH: "All of that certain lot, piece or parcel of land situate, lying and being in Hardy Magisterial District, County of Isle of Wight, State of Virginia, bounded and described as follows: Beginning at a marker set in the
Northwestern corner of the lot hereby conveyed, which is a corner on the lot hereby conveyed and other lands formerly of John A. Ramsey, thence running in a straight line in a general Southerly direction for a distance of Seventy (70) yards, to a marker, a corner on other lands formerly of said John A. Ramsey and the land conveyed; thence running in a straight line in a general Easterly direction for a distance of Seventy (70) yards to a marker, a corner on other lands formerly of the said John A. Ramsey and the land hereby conveyed; thence running in a straight line in a general Northerly direction for a distance of Seventy (70) yards to a marker, a corner on other lands formerly of the said John A. Ramsey and the land hereby conveyed; thence running in a straight line in a general Westerly direction for a distance of Seventy (70) yards to a marker, the point of beginning."

"Together with a right of way Twenty (20) feet wide leading from the lot hereby conveyed to the state highway which leads from Smithfield to Proctor's Bridge, for the purpose of ingress and egress from the said lot hereby conveyed to the said state highway as more fully described in the aforesaid deed."

It being the same property which was conveyed to John A. Ramsey, Jr. by Deed of Partition and Exchange (Parcel Ten) between John A. Ramsey, Jr. and others, dated June 15, 2005, and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia as Instrument No. 058440, page 189 on November 14, 2005.

SEVENTH: "PARCEL ONE: All of that certain tract, piece or parcel of land, together with the appurtenances thereto belonging, situate, lying and being in Hardy Magisterial District, in the County of Isle of Wight, State of Virginia, containing by estimation 419 acres, and being known as the Johnson or Cofer Farm, and being bounded on the north by the lands now or formerly of John F. Bell and Nannie J. Cofer; on the east by the land now or formerly of J. J. Holleman; on the south by the

lands now or formerly of J. J. Holleman and John A. Ramsey, and on the west by the lands now or formerly of John A. Ramsey and Blackwater River. The said Parcel One herein conveyed is the same in all respects as the first of two tracts conveyed to Walter G. Betts (also known as Walter Guy Betts), by deed dated July 10, 1919 from George F. Whitley, Special Commissioner, and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County in Deed Book 89, page 303, SAVE AND EXCEPT an interest still retained by Mary Elinor Betts (unmarried) and also known as Mary E. Betts, but better known and hereafter referred to as "Elinor", which was conveyed to Elinor as well as to Cora Lee Betts, Myrtle J. Betts (now Holt), Gracie C. Betts (now Gwaltney) and Ruth O. Betts (now Hill) by document dated July 10, 1919 from W. Guy Betts, recorded in the Clerk's Office aforesaid in Deed Book 89, page 313, the interest therein granted being expressed in said deed as follows: "...doth grant unto the said Cora Lee Betts, and the said minor children (NOTE: these minor children would be Myrtle J. Betts, Gracie C. Betts, Ruth O. Betts and Mary Elinor Betts) the free use of the dwelling house and other houses necessary for the purpose, located on the Johnson or Cofer Farm, to be used as a home for the said Cora Lee Betts, and the said minor children, so long as they live or until marriage ..." , the only one still retaining an interest being Mary Elinor Betts as Cora Lee Betts has since died and Myrtle, Gracie, and Ruth have married.

"PARCEL TWO: All that certain tract, piece or parcel of land, lying, being and situate in the said County and State, containing One Hundred Twelve (112) acres, more or less, and bounded and described as follows: On the north by the lands now or formerly of B. F. Wells, formerly the lands of Nannie W. Cofer; on the east by the lands now or formerly of J. J. Holleman and W. Guy Betts; on the south and west by the lands now or formerly of W. Guy Betts, formerly the lands of Allie J. Cofer. It being the One Hundred Twenty (120) acre tract of land conveyed to the said C. S. Betts by Nannie W. Cofer, widow, by deed, bearing date of February the 2nd, 1923, and of record in the Clerk's Office of Isle of Wight County, in Deed Book 93, page 444, less eight (8) acres sold to B. F. Wells

It being the same property which was conveyed to John A. Ramsey, Jr. by Vivian B. Lewis and W. P. Lewis, Jr., her husband, by deed dated December 9, 1983 and recorded in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia, in Deed Book 291, page 677.

Together with all and singular the buildings and improvements, if any, thereon, rights and privileges, tenements, hereditaments, rights of way, easements and appurtenances unto the said land belonging or in anywise appertaining.

The real estate herein conveyed is the same in all respects as that conveyed by deed dated May 16, 2006 from John A. Ramsey, Jr. and Mildred C. Ramsey to John A. Ramsey, Jr. and Mildred C. Ramsey, Trustees under the John A. Ramsey, Jr., Second Amended and Restated Revocable Trust Agreement Dated September 12, 2005 and recorded in the Clerk's Office of the Circuit Court of the County of Isle of Wight, Virginia, as Instrument No. 060003678.

This conveyance is made expressly subject to the restrictions, conditions, rights-of-way, and easements, if any, contained in the instruments constituting the chain of title to the property conveyed herein, and to matters visible upon inspection.

Whenever used herein, the singular shall include the plural, the plural the singular, and the use of any gender shall include all other genders.

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WITNESS the following signature and seal:

Mildred C Ramsey (SEAL)
MILDRED C. RAMSEY, TRUSTEE

STATE OF VIRGINIA,
COUNTY OF ISLE OF WIGHT, to-wit:

The foregoing instrument was acknowledged before me this 28th day of February, 2013 by Mildred C. Ramsey, Trustee.

My commission expires: July 31, 2014

Regina L Crocker
Notary Public

REGINA L. CROCKER
NOTARY PUBLIC
REG. #4356398
MY COMMISSION EXPIRES
07/31/14
COMMONWEALTH OF VIRGINIA

T. Riddick Babineau

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INSTRUMENT #130001601
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
MARCH 22, 2013 AT 04:31PM

SHARON N. JONES, CLERK
RECORDED BY: DDS

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Exhibit H – Proof of Interconnection Application

Please remember that no action will be taken on this request until the items listed below are received. In order for your project to be entered into the PJM queue process please remit the following:

1. Submit executed copy of Feasibility Study agreement, (Attachment N), to

   PJM Interconnection
   2750 Monroe Boulevard
   Audubon, PA 19403
   Attention: Jeannette Mittan, 610-666-3158

2. Deposit required:

   Large Generation Interconnection Requests (>20 MW)

   - **Months 1 - 4 of Queue Period** - $10,000 deposit (non-refundable), plus $100 per MW (refundable) – Maximum Deposit - $110,000
   - **Month 5 of Queue Period** - $20,000 deposit (non-refundable), plus $150 per MW (refundable) – Maximum Deposit - $120,000
   - **Month 6 of Queue Period** - $30,000 deposit (non-refundable), plus $200 per MW (refundable) – Maximum Deposit - $130,000

   Small Generation Interconnection Requests (20 MW or less)

   - **Months 1 - 4 of Queue Period** - $10,000 deposit (refundable)
   - **Month 5 of Queue Period** - $12,000 deposit (refundable)
   - **Month 6 of Queue Period** - $15,000 deposit (refundable)

3. Proof of ownership (deed, lease, option to buy or lease with a minimum 3-year option term, etc.). For wind projects, a minimum of 10 acres per MW on flat land, or 3 acres per MW along a ridge line must be shown as part of the site control, or a site plan showing acreage controlled, location of wind turbines, etc. See Manual 14a for details.

4. Contact Information for Primary Contact:

Name	Daniel Wang
Address	201 Mission St., Suite 540, San Francisco, CA 94105
Phone	(415) 872-0764
Cell Phone	(858) 472-8533
Fax	N/A
E-mail Address	ic@spower.com

5. Federal Tax ID number. 47-2888616

6. Phone number and e-mail address of person who should receive invoices. sPower Accounts Payable
   AccountsPayable@spower.co
   (801) 679-3500

7. Please provide your DUNS number (if available). 07-993-1110

If you have questions or concerns, please contact our System Planning Department phone number is 610-666-3158.

Generation Interconnection Feasibility Study Agreement

RECITALS

1. This Generation Interconnection Feasibility Study Agreement, dated as of 10.28.2016, is entered into, by and between FTS Devco, LLC ("Interconnection Customer") and PJM Interconnection, L.L.C. ("Transmission Provider") pursuant to Part IV and Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff ("PJM Tariff"). Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the PJM Tariff.

2. Pursuant to Section 36.1.01, 110.1, or 111.1, of the PJM Tariff, the Interconnection Customer has submitted an Interconnection Request and has paid the applicable initial deposit to the Transmission Provider and the applicable non-refundable base deposit for a proposed interconnection of a generation facility over 20 MW; or the applicable initial deposit and the applicable non-refundable base deposit for a proposed interconnection of a generation facility 20 MW or less but greater than 2 MW, as applicable, to the Transmission Provider.

3. Interconnection Customer requests interconnection to the Transmission System of a generating project with the following specifications.

   a. Location of generating unit site:
   37.014667, -76.738786

   b. Identification of evidence of ownership interest in, or right to acquire or control, the generating site:
   Irrevocable option to purchase

   c. Size in megawatts of generating unit or increase in capacity of existing generating unit:

      A. Maximum Facility Output of the generating unit:

      240

      B. If Interconnection Request is for an increase in capacity of existing generating unit, specify size in megawatts of the increase in capacity of existing generating unit:

      C. Specify any portion of the facility's capacity that you wish to be a Capacity Resource or Energy Resource.

      240 MW Capacity Resource

      240 MW Energy Resource

PLEASE NOTE: THE CAPACITY INDICATED IN YOUR RESPONSE TO PART C OF THIS ITEM MAY BE REDUCED, BUT MAY NOT BE INCREASED, WITH RESPECT TO THIS INTERCONNECTION REQUEST FOR THIS PROJECT.

D. Identify the fuel type of the generating unit.

Solar

d. Description of the equipment configuration:
inverter based solar photovoltaic

e. Planned date the generating unit or increase in capacity will be in service:
10.01.2019

f. Is the generating unit to be evaluated as a Capacity Resource?: Yes

If yes, check here to be evaluated also as an Energy Resource: ✓

g. Is the generating unit Behind The Meter Generation? No

If Yes:

A. Specify any portion of the facility's capacity that you wish to be a Capacity Resource or Energy Resource.

PLEASE NOTE: THE CAPACITY INDICATED IN YOUR RESPONSE TO PART A O F THIS ITEM MAY BE REDUCED, BUT MAY NOT BE INCREASED, WITH RESPECT TO THIS INTERCONNECTION REQUEST FOR THIS PROJECT.

B. Identify the type and size of the load located (or to be located) at the site of such generation.

C. Describe the electrical connections between the generation facility and the load.

h. Other information:

_____

_____

PURPOSE OF THE FEASIBILITY STUDY

4. Consistent with Section 36.2 of the PJM Tariff, the Transmission Provider shall conduct a Generation Interconnection Feasibility Study to provide the Interconnection Customer with preliminary determinations of: (i) the type and scope of the Attachment Facilities, Local Upgrades, and Network Upgrades that will be necessary to accommodate the Interconnection Customer's Interconnection Request; (ii) the time that will be required to construct such facilities and upgrades; and (iii) the Interconnection Customer's cost responsibility for the necessary facilities and upgrades. In the event that the Transmission Provider is unable to complete the Generation Interconnection Feasibility Study within the timeframe prescribed in Section 36.2 of the PJM Tariff, the Transmission Provider shall notify the Interconnection Customer and explain the reasons for the delay.

5. The Generation Interconnection Feasibility Study conducted hereunder will provide only preliminary non-final estimates of the cost and length of time required to accommodate the Interconnection Customer's Interconnection Request. More comprehensive estimates will be developed only upon e xecution of a System Impact Study Agreement and a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The Generation Interconnection Feasibility Study necessarily will employ various assumptions regarding the Interconnection Request, other pending requests, and PJM's Regional Transmission Expansion Plan at the time of the study. T he Generation Interconnection Feasibility Study shall not obligate the Transmission Provider or the Transmission Owners to interconnect with the Interconnection Customer or construct any facilities or upgrades.

CONFIDENTIALITY

6. The Interconnection Customer agrees to provide all information requested by the Transmission Provider necessary to complete the Generation Interconnection Feasibility Study. S ubject to paragraph 7 of this Generation Interconnection Feasibility Study Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 6 shall be and remain confidential.

7. Until completion of the Generation Interconnection Feasibility Study, the Transmission Provider shall keep confidential all information provided to it by the Interconnection Customer. U pon completion of the Generation Interconnection Feasibility Study, the study will be listed on the Transmission Provider's OASIS and, to the extent required by Commission regulations, will be made publicly available upon request, except that the identity of the Interconnection Customer shall remain confidential and will not be posted on the Transmission Provider's OASIS.

8. Interconnection Customer acknowledges that, consistent with the PJM Tariff, the Transmission Provider may contract with consultants, including the Transmission Owners, to provide services or expertise in the Generation Interconnection Feasibility Study process and that the Transmission Provider may disseminate information to the Transmission Owners.

COST RESPONSIBILITY

9. The Interconnection Customer shall reimburse the Transmission Provider for the actual cost of the Generation Interconnection Feasibility Study. T he deposit paid by the Interconnection Customer described in Section 2 of this Agreement shall be applied toward the Interconnection Customer's Generation Interconnection Feasibility Study cost responsibility. In the event that the Transmission Provider anticipates that the actual study costs will exceed the deposit described in Section 2 of this agreement, the Transmission Provider shall provide the Interconnection Customer with an estimate of the study costs. Within 10 days of receiving such estimate, the Interconnection Customer may withdraw its Interconnection Request. Unless the Interconnection Request is withdrawn, the Interconnection Customer agrees to pay the actual additional costs of the Generation Interconnection Feasibility Study.

DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY

10. In analyzing and preparing the Generation Interconnection Feasibility Study, the Transmission Provider, the Transmission Owner(s), and any other subcontractors employed by the Transmission Provider shall have to rely on information provided by the Interconnection Customer and possibly by third parties and may not have control over the accuracy of such information. A ccordingly, NEITHER THE TRANSMISSION PROVIDER, THE TRANSMISSION OWNER(S), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY THE TRANSMISSION PROVIDER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A P ARTICULAR PURPOSE WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE FEASIBILITY STUDY. The Interconnection Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder. N either this Generation Interconnection Feasibility Study Agreement nor the Generation Interconnection Feasibility Study prepared hereunder is intended, nor shall either be interpreted, to constitute agreement by the Transmission Provider or the Transmission Owner(s) to provide any transmission or interconnection service to or on be half of the Interconnection Customer either at this point in time or in the future.

11. In no e vent will the Transmission Provider, Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits,

whether under this Generation Interconnection Feasibility Study Agreement or otherwise, even if the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider have been advised of the possibility of such a loss. N or shall the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider be liable for any delay in delivery or of the non-performance or delay in performance of the Transmission Provider's obligations under this Generation Interconnection Feasibility Study Agreement.

Without limitation of the foregoing, the Interconnection Customer further agrees that Transmission Owner(s) and other subcontractors employed by the Transmission Provider to prepare or assist in the preparation of any Generation Interconnection Feasibility Study shall be deemed third party beneficiaries of this provision entitled "Disclaimer of Warranty/Limitation of Liability."

MISCELLANEOUS

12. Any notice or request made to or by either party regarding this Generation Interconnection Feasibility Study Agreement shall be made to the representative of the other party as indicated below.

Transmission Provider
PJM Interconnection
2750 Monroe Boulevard
Audubon, PA 19403

Interconnection Customer
FTS Devco, LLC
201 Mission Street, Suite 540
San Francisco CA , 94105

13. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this Generation Interconnection Feasibility Study Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.

14. This Generation Interconnection Feasibility Study Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all parties hereto.

15. This Generation Interconnection Feasibility Study Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.

16. Neither this Generation Interconnection Feasibility Study Agreement nor the Generation Interconnection Feasibility Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.

17. The provisions of Part IV of the PJM Tariff are incorporated herein and made a part hereof.

18. Governing Law, Regulatory Authority, and Rules
The validity, interpretation and enforcement of this Generation Interconnection Feasibility Study Agreement and each of its provisions shall be governed by the laws of the state of VA (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Generation Interconnection Feasibility Study Agreement is subject to all Applicable Laws and Regulations. Each party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

19. No Third-Party Beneficiaries
This Generation Interconnection Feasibility Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the parties, and the obligations herein assumed are solely for the use and benefit of the parties, their successors in interest and where permitted, their assigns.

20. Multiple Counterparts
This Generation Interconnection Feasibility Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

21. No Partnership
This Generation Interconnection Feasibility Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the parties or to impose any partnership obligation or partnership liability upon either party. Neither party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other party.

22. Severability
If any provision or portion of this Generation Interconnection Feasibility Study Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the parties shall negotiate in good faith to restore insofar as practicable the benefits to each party that were affected by such ruling, and (3) the remainder of this Generation Interconnection Feasibility Study Agreement shall remain in full force and effect.

23. Reservation of Rights

The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this Generation Interconnection Feasibility Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and the Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Generation Interconnection Feasibility Study Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each party shall have the right to protest any such filing by the other party and to participate fully in any proceeding before FERC in which such modifications may be considered. N othing in this Generation Interconnection Feasibility Study Agreement shall limit th e rights of the parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the parties otherwise agree as provided herein.

IN WITNESS WHEREOF, the Transmission Provider and the Interconnection Customer have caused this Generation Interconnection Feasibility Study Agreement to be executed by their respective authorized officials.

Transmission Provider: PJM Interconnection, L.L.C.

By: _____ _____ _____

Name Title Date

_____

Printed Name

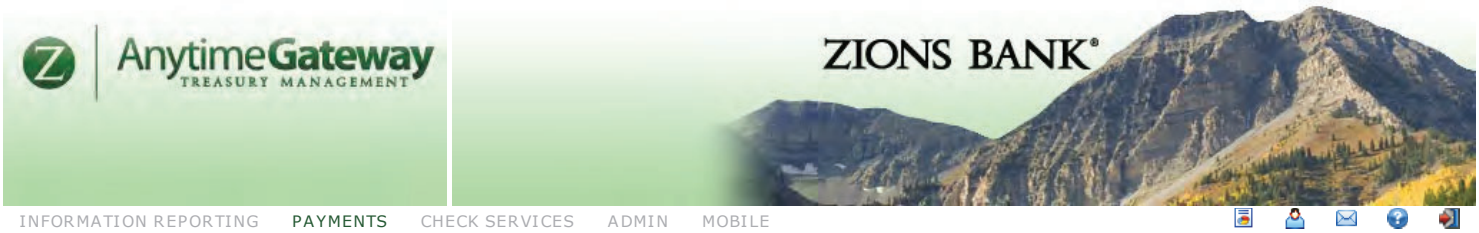
Interconnection Customer:

By: _____ Director 10.28.2016

Name Title Date

Adam Foltz

Printed Name



View Payment: FedWire

Use this screen to view a FedWire.

Payment Information

Payment Type: Fedwire

View Payment History

Status: Confirmed
Confirmation Number: IMAD:1028L4B74B3C002778
Sequence Number: 21246755

Debit Account: Demand Deposit Account -- 275026979 -- USD
Debit Amount: $78,000.00
Value Date: 10/28/2016
Send Date: 10/28/2016
Frequency: One Time Only

Sender's Reference:
Reference for Beneficiary:

Details of Payment: Feasibility Study Deposit
Cavalier Solar

Beneficiary Information

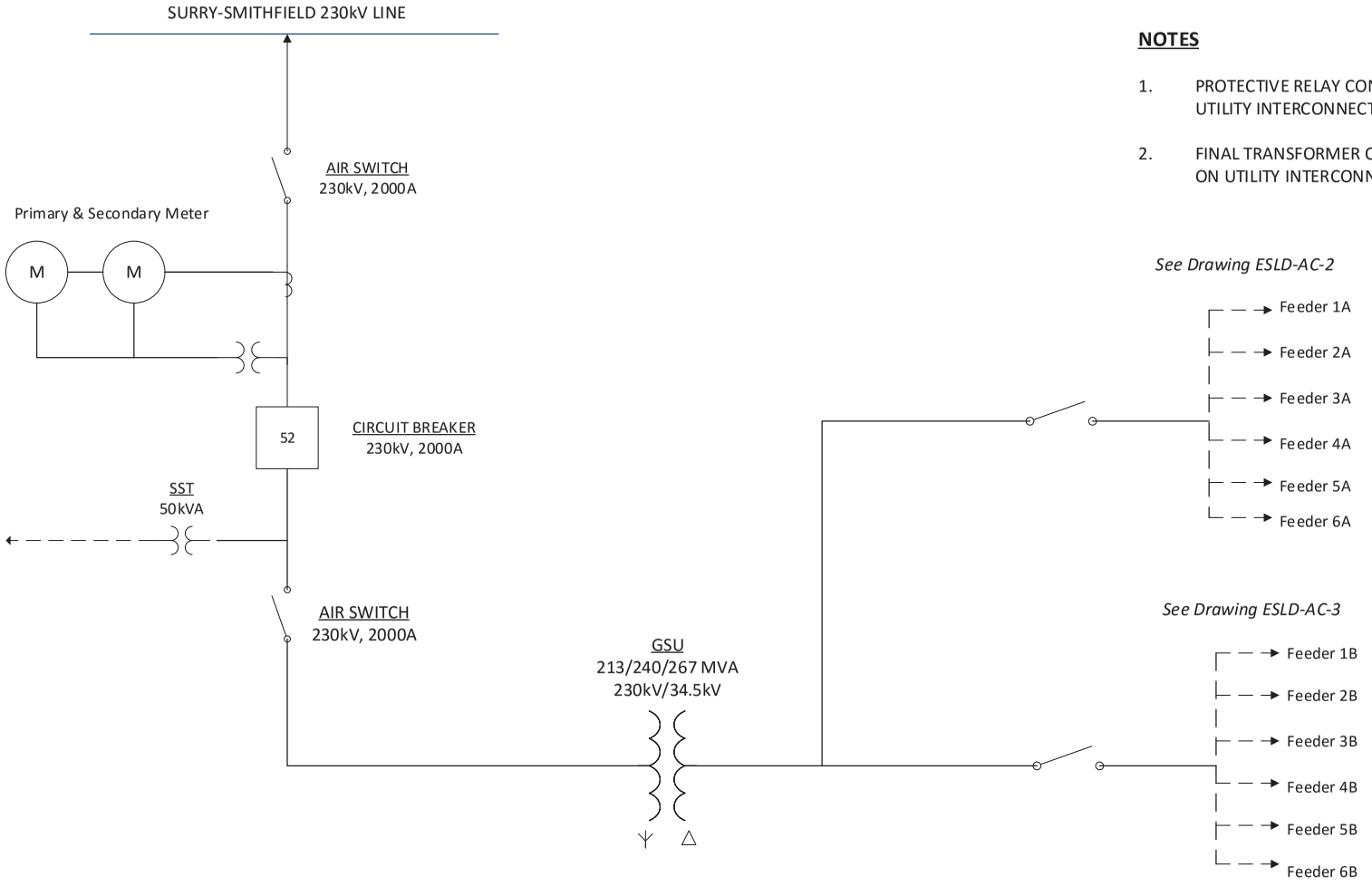
Beneficiary ID Type: Account Number
Beneficiary ID: 8013589826
Beneficiary Name: PJM Interconnection
Address:

Beneficiary Bank ID: 031207607
Beneficiary Bank ID Type: ABA (Wire)

Beneficiary Bank Name: PNC BANK, NATIONAL ASSOCIATION
Address: CHERRY HILL NJ UNITED STATES

Bank to Bank Information

Cancel

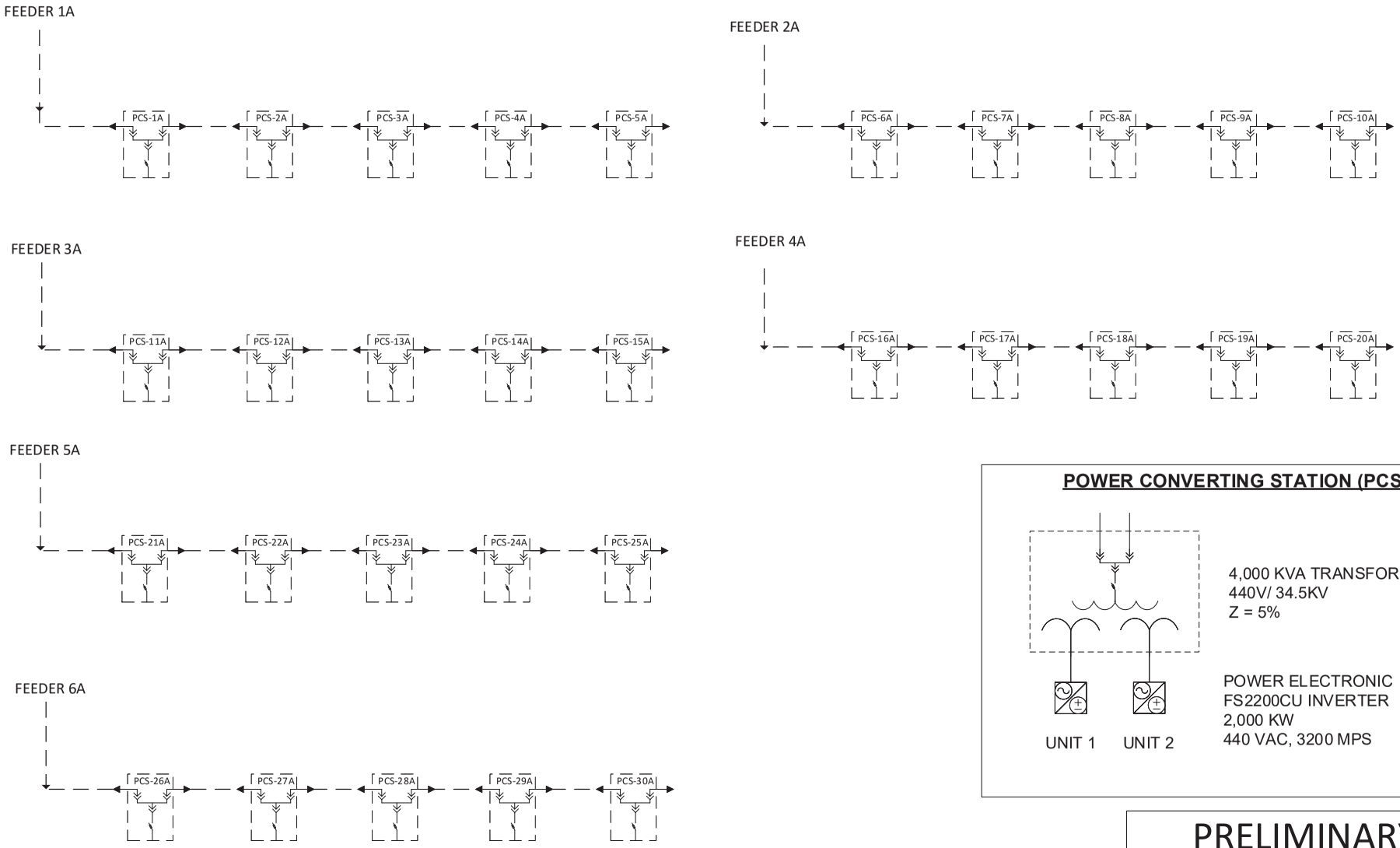


NOTES

1. PROTECTIVE RELAY CONFIGURATION DEDEPENT ON UTILITY INTERCONNECTION REQUIREMENTS.
2. FINAL TRANSFORMER CONFIGURATION DEPENDENT ON UTILITY INTERCONNECTION REQUIREMENTS.

PRELIMINARY

S·POWER SUSTAINABLE POWER GROUP	**PROJECT NAME: CAVALIER SOLAR** **PROJECT OWNER: FTS DEVCO LLC**	DRAWING NAME: ELECTRICAL SINGLE LINE DIAGRAM DRAWING NUMER: ESLD – AC-1	DATE: 10/28/2016 REVISION: 0



POWER CONVERTING STATION (PCS)

4,000 KVA TRANSFORMER
440V/ 34.5KV
Z = 5%

POWER ELECTRONIC
FS2200CU INVERTER
2,000 KW
440 VAC, 3200 MPS

PRELIMINARY

S·POWER
SUSTAINABLE POWER GROUP

PROJECT NAME: CAVALIER SOLAR

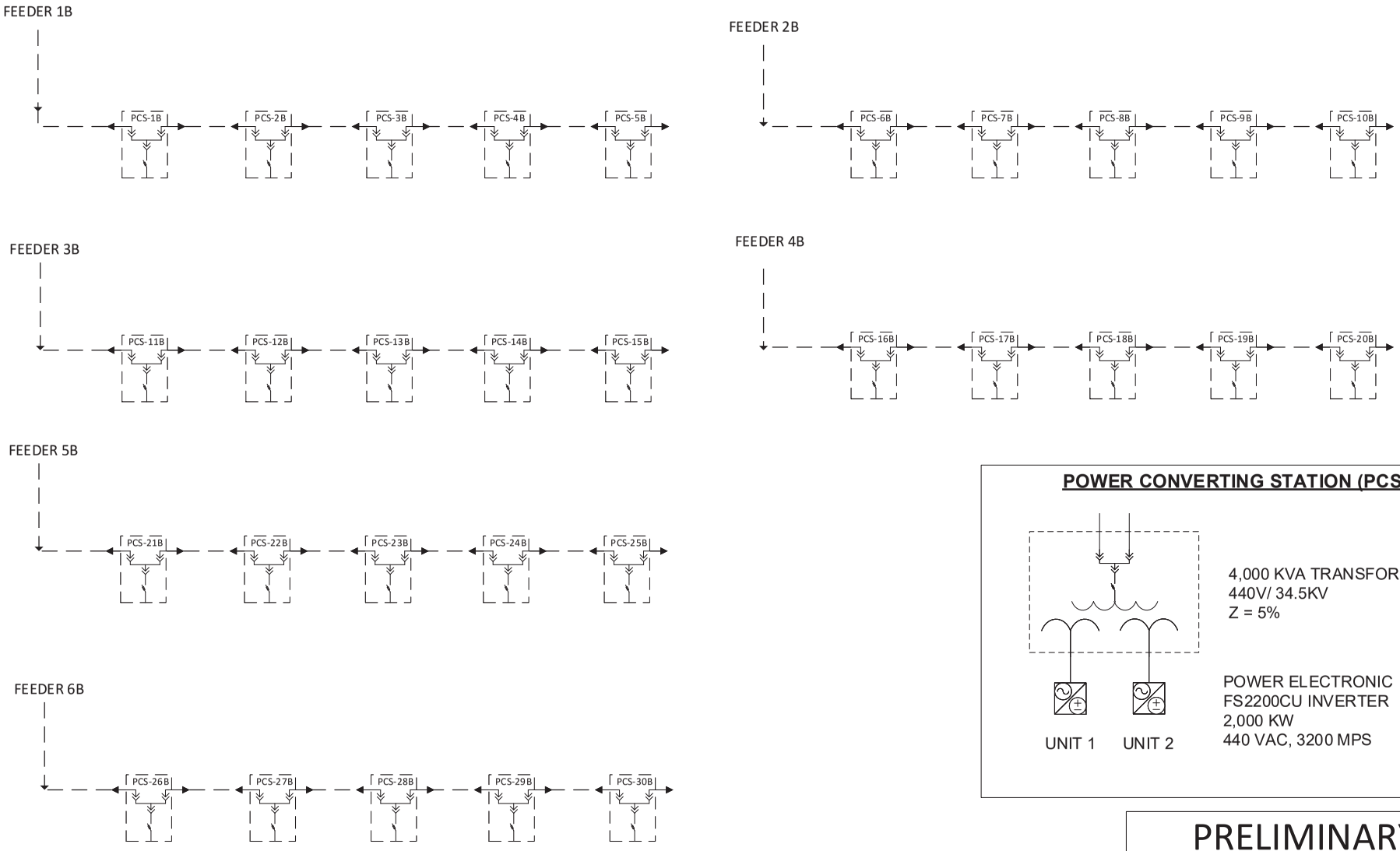
PROJECT OWNER: FTS DEVCO LLC

DRAWING NAME: ELECTRICAL SINGLE LINE DIAGRAM

DRAWING NUMER: ESLD – AC-2

DATE: 10/28/2016

REVISION: 0



POWER CONVERTING STATION (PCS)

4,000 KVA TRANSFORMER
440V/ 34.5KV
Z = 5%

POWER ELECTRONIC
FS2200CU INVERTER
2,000 KW
440 VAC, 3200 MPS

PRELIMINARY

S·POWER
SUSTAINABLE POWER GROUP

PROJECT NAME: CAVALIER SOLAR

PROJECT OWNER: FTS DEVCO LLC

DRAWING NAME: ELECTRICAL SINGLE LINE DIAGRAM

DRAWING NUMER: ESLD – AC-3

DATE: 10/28/2016

REVISION: 0

Isle of Wight County, VA	Map Details	Map Description	
	N Septa Substation Switchgear Gen-tie Surry-Smithfield 230 kV Project Parcels 0 0.25 0.5 Miles	Cavalier Solar will be located on private land in Isle of Wight County, VA	Author: JL Date: 10/28/2016 Version: 1.0 Type: Exhibit
		S·POWER SUSTAINABLE POWER GROUP	Cavalier Solar

Exhibit I – County Tax Records of Participating Properties

Isle of Wight, Virginia

generated on 8/13/2020 2:05:18 PM CDT

Parcel

Parcel ID	Alt. PIN	Parcel Address	AV - Tot. Lnd & Improv.	Data as of
10-01-017	1003	MILL SWAMP RD, SMITHFIELD	$117,300	8/10/2020

Property Owner Information

Property Owner	DELK MARIE S LIFE ESTATE
Property Owner Address	804 GENERAL PICKETT DR SUFFOLK VA 23434
Transfer Date	03/23/2020
Document No.	200001416
Document Reference No.	

Location Information

Tax Group Code	40	Routing No.	
Township No.	001,	Legal Desc.	ADJ SELF
Parcel Address	MILL SWAMP RD, SMITHFIELD		
Legal Acreage	150.0000		

Parcel Information

Property Class Code	AGR/UNDEV 100 UP ACR
Neighborhood Code	1
Neighborhood Factor	.00
Neighborhood Type	B

Assessment Information

Current AV - Total Land	$117,300	Adj. Factor Applied	0.00
Current AV - Total Improv.	$0	Average AV/Acre	$0
AV - Tot. Lnd & Improv.	$117,300	Appraisal Date	9/27/2018
Reason for Change Code	19		
Prior AV - Total Land	$103,100		
Prior AV - Total Improv.	$0		

PARCEL: 10-01-020

LOCATION: JONES DR

OWNER:
SEWARD MICHAEL A & EMILY B
9310 JONES DRIVE
SMITHFIELD VA 23430

STATUS:

TOTAL ACRES:	123.720
DEFERRED ACRES:	.000
LAND VALUATION:	93,400
BUILDING VALUATION:	0
EXEMPTIONS:	0
TAXABLE VALUATION:	93,400
INTEREST PER DIEM	.00

LEGAL DESCRIPTION:
ADJ T H DELK

DEED DATE: 04/12/2006 BOOK/PAGE: INTEREST DATE: 10/03/2019

YEAR INST	TYPE CHARGE	BILL	BILLED	PRIN DUE	INT DUE	TOTAL DUE
2019	RE-R	16317				
1	REFIRST		396.95	396.95	.00	.00
2	RESECOND		396.95	396.95	.00	.00
			793.90	793.90	.00	.00
GRAND TOTALS			793.90	793.90	.00	.00

PARCEL: 10-01-021

LOCATION: JONES DR

OWNER:
SEWARD MICHAEL A & EMILY B
9310 JONES DRIVE
SMITHFIELD VA 23430

STATUS:

TOTAL ACRES:	130.700
DEFERRED ACRES:	.000
LAND VALUATION:	83,700
BUILDING VALUATION:	0
EXEMPTIONS:	0
TAXABLE VALUATION:	83,700
INTEREST PER DIEM	.00

LEGAL DESCRIPTION:
ADJ JOE B GALE

DEED DATE: 05/04/2006 BOOK/PAGE: INTEREST DATE: 10/03/2019

YEAR INST	TYPE CHARGE	BILL	BILLED	PRIN DUE	INT DUE	TOTAL DUE
2019	RE-R	16318				
1	REFIRST		355.73	355.73	.00	.00
2	RESECOND		355.72	355.72	.00	.00
			711.45	711.45	.00	.00
GRAND TOTALS			711.45	711.45	.00	.00

PARCEL: 10-01-023

LOCATION: JONES DR

OWNER:
SEWARD MICHAEL A & EMILY B
9310 JONES DRIVE
SMITHFIELD VA 23430

STATUS:

TOTAL ACRES:	120.280
DEFERRED ACRES:	.000
LAND VALUATION:	80,700
BUILDING VALUATION:	17,000
EXEMPTIONS:	0
TAXABLE VALUATION:	97,700
INTEREST PER DIEM	.00

LEGAL DESCRIPTION:
ADJ T H DELK

DEED DATE: 04/12/2006 BOOK/PAGE: INTEREST DATE: 10/03/2019

YEAR INST	TYPE CHARGE	BILL	BILLED	PRIN DUE	INT DUE	TOTAL DUE
2019	RE-R	16319				
1	REFIRST		415.23	415.23	.00	.00
	STORMWATER		27.00	27.00	.00	.00
			442.23	442.23	.00	.00
2	RESECOND		415.22	415.22	.00	.00
	STORMWATER		27.00	27.00	.00	.00
			442.22	442.22	.00	.00
			884.45	884.45	.00	.00
GRAND TOTALS			884.45	884.45	.00	.00

PARCEL: 10-01-023B

LOCATION: 9310 JONES DR

OWNER:
SEWARD MICHAEL A & EMILY B
9310 JONES DRIVE
SMITHFIELD VA 23430

STATUS:

TOTAL ACRES:	1.270
DEFERRED ACRES:	.000
LAND VALUATION:	41,900
BUILDING VALUATION:	173,900
EXEMPTIONS:	0
TAXABLE VALUATION:	215,800
INTEREST PER DIEM	.00

LEGAL DESCRIPTION:
PT PROP E BAXTER SEWARD

DEED DATE: 09/09/1991 BOOK/PAGE: 387/84 INTEREST DATE: 10/03/2019

YEAR INST	TYPE CHARGE	BILL	BILLED	PRIN DUE	INT DUE	TOTAL DUE
2019	RE-R	16320				
1	REFIRST		917.15	917.15	.00	.00
	STORMWATER		27.00	27.00	.00	.00
			944.15	944.15	.00	.00
2	RESECOND		917.15	917.15	.00	.00
	STORMWATER		27.00	27.00	.00	.00
			944.15	944.15	.00	.00
			1,888.30	1,888.30	.00	.00
GRAND TOTALS			1,888.30	1,888.30	.00	.00

Isle of Wight, Virginia

generated on 8/13/2020 2:04:52 PM CDT

Parcel

Parcel ID	Alt. PIN	Parcel Address	AV - Tot. Lnd & Improv.	Data as of
10-01-024	1013	MILL SWAMP RD, SMITHFIELD	$103,500	8/10/2020

Property Owner Information

Property Owner	DELK MARIE S LIFE ESTATE
Property Owner Address	804 GENERAL PICKETT DR SUFFOLK VA 23434
Transfer Date	03/23/2020
Document No.	200001416
Document Reference No.	

Location Information

Tax Group Code	40	Routing No.	
Township No.	001,	Legal Desc.	DELK' S CORNER
Parcel Address	MILL SWAMP RD, SMITHFIELD		
Legal Acreage	126.0800		

Parcel Information

Property Class Code	AGR/UNDEV 100 UP ACR
Neighborhood Code	1
Neighborhood Factor	.00
Neighborhood Type	B

Assessment Information

Current AV - Total Land	$103,500	Adj. Factor Applied	0.00
Current AV - Total Improv.	$0	Average AV/Acre	$0
AV - Tot. Lnd & Improv.	$103,500	Appraisal Date	9/27/2018
Reason for Change Code	19		
Prior AV - Total Land	$90,200		
Prior AV - Total Improv.	$0		

PARCEL: 10-01-025

LOCATION: BURWELLS BAY RD

OWNER:
BARCROFT JEAN E SOLE TRUSTEE
JEAN E BARCROFT LIVING TRUST
11470 MODEST NECK RD
IVOR VA 23866

STATUS:

TOTAL ACRES:	120.080
DEFERRED ACRES:	.000
LAND VALUATION:	97,600
BUILDING VALUATION:	0
EXEMPTIONS:	0
TAXABLE VALUATION:	97,600
INTEREST PER DIEM	.00

LEGAL DESCRIPTION:
ADJ DAN G DELK

DEED DATE: BOOK/PAGE: INTEREST DATE: 10/03/2019

YEAR INST	TYPE CHARGE	BILL	BILLED	PRIN DUE	INT DUE	TOTAL DUE
2019	RE-R	916				
1	REFIRST		414.80	414.80	.00	.00
2	RESECOND		414.80	414.80	.00	.00
			829.60	829.60	.00	.00
GRAND TOTALS			829.60	829.60	.00	.00

Isle of Wight, Virginia

generated on 8/13/2020 2:03:25 PM CDT

Parcel

Parcel ID	Alt. PIN	Parcel Address	AV - Tot. Lnd & Improv.	Data as of
10-01-030	1025	9580 MILL SWAMP RD, SMTIHFIELD	$188,100	8/10/2020

Property Owner Information

Property Owner	DELK MARIE S LIFE ESTATE
Property Owner Address	804 GENERAL PICKETT DR SUFFOLK VA 23434
Transfer Date	03/23/2020
Document No.	200001416
Document Reference No.	

Location Information

Tax Group Code	40	Routing No.	
Township No.	001,	Legal Desc.	ADJ NANCY D HALL
Parcel Address	9580 MILL SWAMP RD, SMTIHFIELD		
Legal Acreage	128.5000		

Parcel Information

Property Class Code	AGR/UNDEV 100 UP ACR
Neighborhood Code	1
Neighborhood Factor	.00
Neighborhood Type	B

Assessment Information

Current AV - Total Land	$149,800	Adj. Factor Applied	0.00
Current AV - Total Improv.	$38,300	Average AV/Acre	$0
AV - Tot. Lnd & Improv.	$188,100	Appraisal Date	9/27/2018
Reason for Change Code	19		
Prior AV - Total Land	$133,900		
Prior AV - Total Improv.	$41,400		

10/03/2019 16:46 | ISLE OF WIGHT COUNTY | P 1
cmcclana | Real Estate Tax Statement | txtaxstm

PARCEL: 11-01-005

LOCATION: 10045 MILL SWAMP RD

OWNER:
476 LLC
632 HAMPTON HIGHWAY
YORKTOWN VA 23693

STATUS:

TOTAL ACRES:	447.610
DEFERRED ACRES:	.000
LAND VALUATION:	286,900
BUILDING VALUATION:	0
EXEMPTIONS:	0
TAXABLE VALUATION:	286,900
INTEREST PER DIEM	.00

LEGAL DESCRIPTION:
BLK 220 #353

DEED DATE: 09/30/2004 BOOK/PAGE: INTEREST DATE: 10/03/2019

YEAR INST	TYPE CHARGE	BILL	BILLED	PRIN DUE	INT DUE	TOTAL DUE
2019	RE-R	31				
1	REFIRST		1,219.33	1,219.33	.00	.00
2	RESECOND		1,219.32	1,219.32	.00	.00
			2,438.65	2,438.65	.00	.00
GRAND TOTALS			2,438.65	2,438.65	.00	.00

Exhibit J – Cavalier Solar Proposed Conditional Use Permit (CUP) Conditions

The following proposed CUP conditions are the initial step in the permitting process between the Applicant and Isle of Wight. The Applicant developed the following conditions based upon the pre-application meeting with Isle of Wight County officials.

1. The Property shall be developed in general conformance with the submitted site plan prepared by Kimley Horn & Associates and dated September 3, 2020.
2. The portion of the Property supporting solar panels shall be enclosed with a chain link security fencing, not less than six (6) feet and no more than twelve (12) feet in height.
3. The Applicant will maintain, at a minimum, the applicable setbacks and screening to the solar array in accordance to the Isle of Wight Zoning Ordinances at the time of the original complete application submission on November 14, 2019, including side and rear yard setbacks, vernal pool setbacks, wildlife corridor, and existing natural vegetation providing a visual screen from adjacent properties and public roads.
4. Where a landscape buffer must be installed by the Applicant, the landscape buffer adjacent to single-family residences and adjacent residential properties will be increased by 2.5 times (25 feet instead of 10 feet) and use the industrial buffer type when calculating landscape points (120 points of landscaping per 500 square feet of buffer zone). No setbacks or vegetation screening will be applied to property boundaries or county boundaries of participating properties zoned agricultural or industrial, or to the Project Site's boundary within a participating property.
5. The proposed electrical substation will have either an existing natural vegetation screening buffer, if a natural screening buffer is absent then the Applicant will install a landscaping buffer that meets the conditions of Article VIII of the Isle of Wight County Zoning Ordinance.
6. The Applicant shall (a) develop a Traffic Mitigation Plan (the "Plan") in consultation with Isle of With County Planning Staff, the Virginia Department of Transportation, the Isle of Wight County Sheriff's Office, and the Virginia State Police to identify and expeditiously resolve or mitigate traffic issues that arise during the construction or decommissioning of the facility and (b) repair public road damage in proximity to the facility, attributable to construction or decommissioning of the facility, such repair to be to conditions comparable to pre-existing conditions prior to construction. As part of the Plan, during construction and decommissioning an on-site staging area of adequate depth will be utilized and during operations an on-site staging area of adequate size shall be provided prior to any gate or badging locations such that traffic coming into the Project Site shall not back up on public roadways.
7. Upon completion of facility construction, the Applicant shall submit a post-construction evaluation of the condition of the roads along the delivery routes to the County Zoning Administrator and VDOT for review and approval by the County. The post-construction evaluation shall include a plan for repairing any damage caused to public roads. The Applicant shall be responsible for causing such repairs to be completed within the timeline approved by the County.
8. The Applicant shall submit a Stormwater Management Plan and an Erosion and Sediment Control Plan with the submission of the site plan. The Applicant shall reimburse the County for reasonable costs related to retaining such third-party inspectors as deemed necessary for project inspections.
9. The Applicant shall submit an Emergency Response Plan with the first submission of the site plan. The plan shall include fire suppression methods that can be immediately deployed during both construction and operation of the Project. The plan shall also include a program of education and training to be provided for County emergency response staff with regards to safety for on-site emergency response.
10. The Applicant will include plans for the installation of a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise, with the Final Site Plan.

11. Prior to final site plan approval, the Applicant shall submit a plan for decommissioning the Project to the County Zoning Administrator. Cavalier Solar will decommission and remove the system and its components at the end of the life of the Project in accordance with Section 5-5003 M.4.g. The Project Site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. All decommissioning and restoration activities will adhere to the requirements of the appropriate governing authorities and the County Zoning Ordinance.
12. If any condition imposed by this Conditional Use Permit is determined to be invalid, void or unenforceable by any court or other governmental authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision or condition of this Conditional Use Permit.
13. Permanent lighting shall be limited to the minimum amount necessary for security purposes, and all lighting shall be shielded and directed to prevent light trespass on surrounding properties.
14. No signage shall be permitted on the Property other than such notices, warnings, and identification information as required by law.
15. If the Applicant ceases using the Property as described in the Application and/or final Conditional Use Permit for a period of twenty-four (24) consecutive months, then the Property shall be deemed abandoned.
16. Pursuant to Va. Code § 15.2-2232(H), the Board waived the requirement that the Solar Facility be reviewed for substantial accord with the County's Comprehensive Plan.

Exhibit K – Economic Impact Assessment

FEBRUARY 9, 2020

CAVALIER SOLAR

ECONOMIC AND FISCAL CONTRIBUTION TO THE COUNTIES OF ISLE OF WIGHT AND SURRY

MANGUM economics

4201 DOMINION BOULEVARD, SUITE 114
GLEN ALLEN, VIRGINIA 23060
804-346-8446
MANGUMECONOMICS.COM

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About Mangum Economics, LLC

Mangum Economics, LLC is a Richmond, Virginia based firm that specializes in producing objective economic, quantitative, and qualitative analysis in support of strategic decision making. Much of our recent work relates to IT & Telecom Infrastructure (data centers, terrestrial and subsea fiber), Renewable Energy, and Economic Development. Examples of typical studies include:

POLICY ANALYSIS

Identify the intended and, more importantly, unintended consequences of proposed legislation and other policy initiatives.

ECONOMIC IMPACT ASSESSMENTS AND RETURN ON INVESTMENT ANALYSES

Measure the economic contribution that businesses and other enterprises make to their localities.

WORKFORCE ANALYSIS

Project the demand for, and supply of, qualified workers.

CLUSTER ANALYSIS

Use occupation and industry clusters to illuminate regional workforce and industry strengths and identify connections between the two.

The Project Team

A. Fletcher Mangum, Ph.D.
Founder and CEO

Martina Arel, M.B.A.
Researcher and Economic Development Specialist

Project Team Bios

Fletcher Mangum, Ph.D.

Fletcher Mangum is the Founder and CEO of Mangum Economics. He has nearly three decades of experience in quantitative analysis and policy development at both the state and federal levels. Fletcher was appointed by Virginia Governor Bob McDonnell to serve on the Governor's and General Assembly's Joint Advisory Board of Economists in 2010, and he was reappointed to that position in 2014 by Governor Terry McAuliffe, and again in 2018 by Governor Ralph Northam. He is also a past President of the Virginia Association of Economists and serves on the board of the Virginia Council on Economic Education. Prior to founding Mangum Economics, Fletcher served as Associate Director at the State Council of Higher Education for Virginia where he was responsible for SCHEV's system wide operating and capital budget recommendations, enrollment projections, and developing the state's master plan for higher education. Fletcher earned his Ph.D. in Economics from George Mason University in 1995, where he specialized in applying economic insights to public policy questions.

Martina Arel, M.B.A.

Martina Arel is a Researcher and Economic Development Specialist with Mangum Economics. In prior work as an independent consultant, she has been involved in a variety of economic development consulting projects for communities and non-profit organizations. She has performed SWOT analyses, compiled regional asset maps, and developed comprehensive community assessments and comparative analyses for strategic economic development plans, as well as produced industry analyses and corporate briefs for business retention and growth programs. Martina previously was also a Project Research Specialist with the Virginia Economic Development Partnership. In that role, she prepared customized marketing proposals for high-profile corporate recruitment projects, quantified incentive packages and programs for clients, and organized and coordinated projects with the state and local government, and business communities. Martina is fluent in German and English, and conversational in French. She holds an M.B.A. from Virginia Commonwealth University.

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Executive Summary

The report assesses the fiscal contribution that the proposed Cavalier Solar project would make to the Counties of Isle of Wight and Surry. The primary findings from that assessment are as follows:

1) **Cavalier Solar is a 239 MW AC solar project that would be located in the Counties of Isle of Wight and Surry, Virginia.**
    - The actively used, fenced-in portion of the project site encompasses about 1,077 acres located in Surry County and 340 acres in Isle of Wight County.
    - The project would involve an investment of $295.2 million in capital equipment and improvements to the existing property. About $225.0 million of that total would be in Surry County and $70.2 million in Isle of Wight County.[1]

2) **The proposed Cavalier Solar project would make a significant economic contribution to Counties of Isle of Wight and Surry:**
    - The proposed Cavalier Solar project would provide an estimated one-time pulse of economic activity to Counties of Isle of Wight and Surry during its construction phase of approximately:
        - 787 full-time-equivalent jobs.
        - $31.0 million in associated labor income.
        - $92.5 million in economic output.
    - The proposed Cavalier Solar project would provide an estimated annual economic impact to Counties of Isle of Wight and Surry during its ongoing operational phase of approximately:
        - 9 full-time-equivalent jobs.
        - $374,397 in associated labor income.
        - $991,440 in economic output.

3) **The proposed Cavalier Solar project is highly unlikely to have any impact on Isle of Wight County's or Surry County's Composite Index or locally funded school budget.**
    - With respect to Isle of Wight County, to do that it would have to drive a percentage change in the county's total real property tax base that was larger than the percentage change in the total real property tax base across all Virginia localities. Between the Virginia Department of Education's 2016-18 and 2018-20 Composite Index calculations, that increase was 3.8 percent.

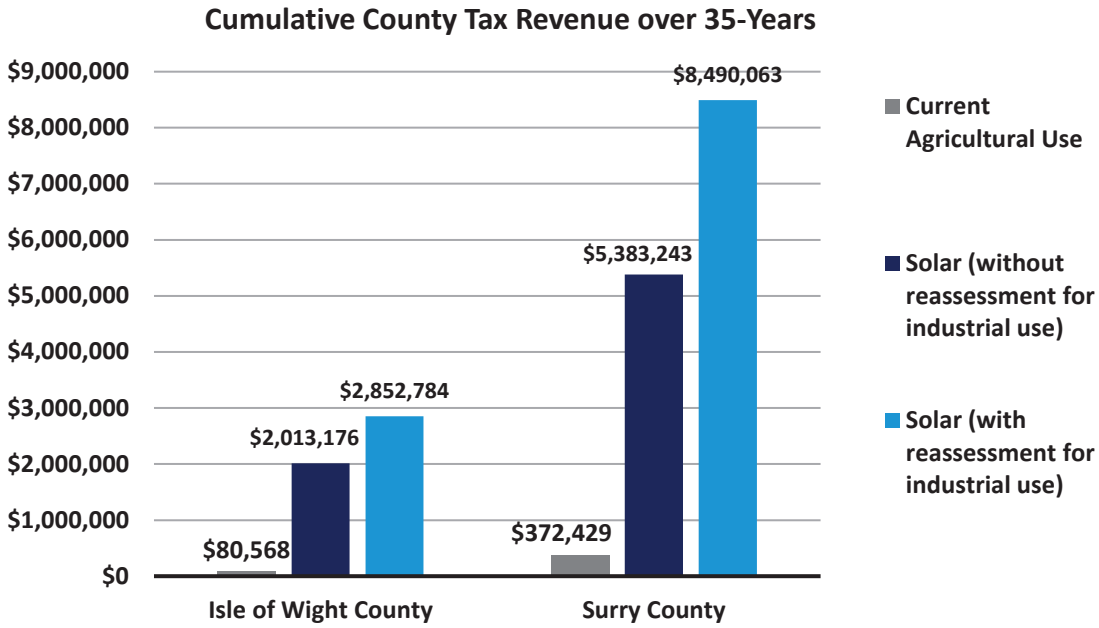
[1] Data Source: sPower.

Even after accounting for both the capital investment in the project itself and the increased property value assessments associated with simply reclassifying the property from agricultural land use to solar use, the proposed Cavalier Solar project would only drive a 0.3 percent increase in Isle of Wight County's total real property tax base.

- With respect to Surry County, the Virginia Department of Education has capped the county's Composite Index at 0.800. As a result, the proposed Cavalier Solar project will have no effect on the county's Composite Index or locally funded school budget.

4) **The proposed Cavalier Solar project will have a significantly greater fiscal impact on the Counties of Isle of Wight and Surry than the property generates in its current agricultural use:**

- $2.7 million in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction.
- Isle of Wight County: The proposed Cavalier Solar project will generate approximately $2.0 million in cumulative county revenue over the facility's anticipated 35-year operational life, exclusive of reassessment of the property from agricultural to industrial use; or $2.9 million in cumulative county revenue over 35-years, if we assume the property is reassessed for industrial use at $10,000 per acre – compared to approximately $80,568 in cumulative county revenue in the property's current agricultural use, for a difference of between $1.9 and $2.8 million.
- Surry County: The proposed Cavalier Solar project will generate approximately $5.4 million in cumulative county revenue over the facility's anticipated 35-year operational life, exclusive of reassessment of the property from agricultural to industrial use; or $8.5 million in cumulative county revenue over 35-years, if we assume the property is reassessed for industrial use at $13,000 per acre – compared to approximately $372,429 in cumulative county revenue in the property's current agricultural use, for a difference of between $5.0 and $8.1 million.



The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

Introduction

This report assesses the economic and fiscal contribution that the proposed Cavalier Solar project would make to the Counties of Isle of Wight and Surry. This report was commissioned by sPower and produced by Mangum Economics.

The Project

The proposed Cavalier solar project is a 239-Megawatt (MW) AC solar project that would be located in the Counties of Isle of Wight and Surry, Virginia. About three quarters of the capacity would be located in Surry County and the remainder in Isle of Wight County. The actively used, fenced-in portion of the project site encompasses about 1,077 acres located in Surry County and 340 acres in Isle of Wight County.

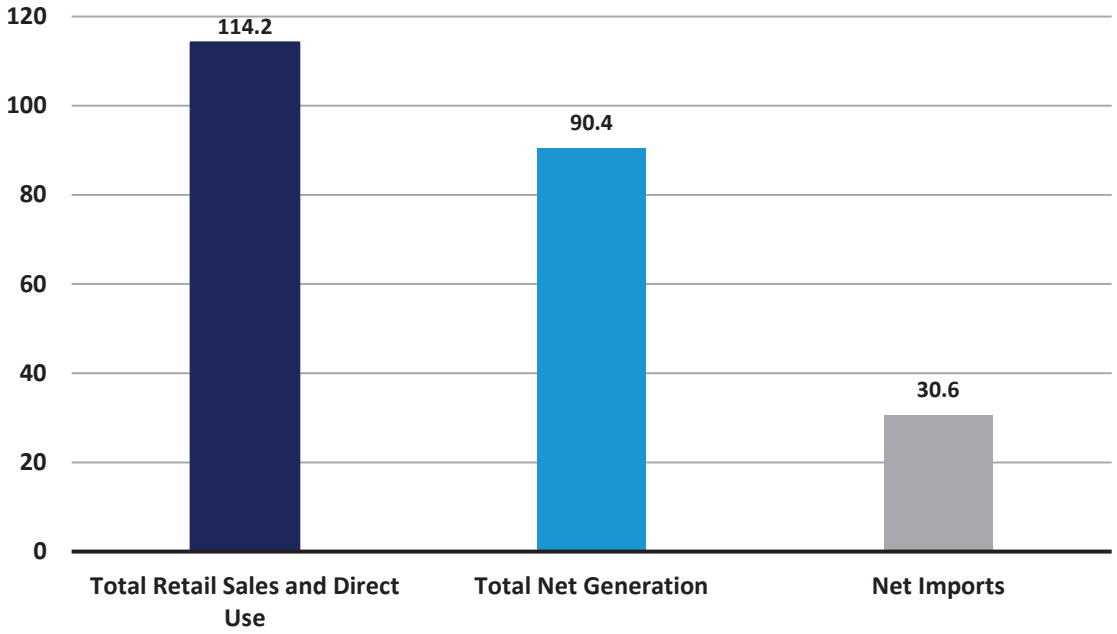
Electricity Production in Virginia

In this section, we provide a backdrop for the proposed Cavalier Solar project by profiling Virginia's electricity production sector and the role that solar energy could play in that sector.

Overall Market

As shown in Figure 1, in 2017 electricity sales and direct use in Virginia totaled 114.2 million megawatt hours, ranking the state 10th among the fifty states in terms of electricity consumption. However, only 79 percent of that demand was met by in-state utilities, independent producers, and other sources. As a result, Virginia had to import 21 percent of the electricity it consumed from producers in other states. As with all imports, this means that the jobs, wages, and economic output created by that production went to localities in those states, not to localities in Virginia.

Figure 1: Demand and Supply of Electricity in Virginia in 2017 (in millions of megawatt-hours)[2]



Sources of Production

Between 2007 and 2017, the total amount of electricity produced in Virginia increased from 78.4 to 90.4 million megawatt hours, while retail and direct consumption of electricity increased from 114.0 to 114.2 million megawatt hours. Figure 2 provides a comparison of the energy sources that were used to produce electricity in Virginia in 2007 and 2017. As these data show, the share of electricity produced using high-emissions energy sources declined over the period. Where coal was the state's largest source of electricity in 2007, accounting for 45 percent of production, by 2017 it had fallen to third place, and accounted for only 12 percent of production.

In contrast, the share of electricity produced using cleaner-burning low-emissions energy sources increased over the period. Where natural gas accounted for only 14 percent of Virginia's electricity production in 2007, by 2017 that proportion had more than tripled to 49 percent, making natural gas the state's largest source of electricity. In addition, renewable energy sources, which are included in the *Other* category, increased from zero percent of Virginia's electricity production in 2007 and to 0.3 percent in 2017.

[2] Data Source: U.S. Energy Information Administration. In this chart, "Net Imports" also takes into account losses during transmission. As a result, it does not directly equal the residual of "Total Net Generation" minus "Total Retail Sales and Direct Use."

Figure 2: Electricity Generation in Virginia by Energy Source[3]

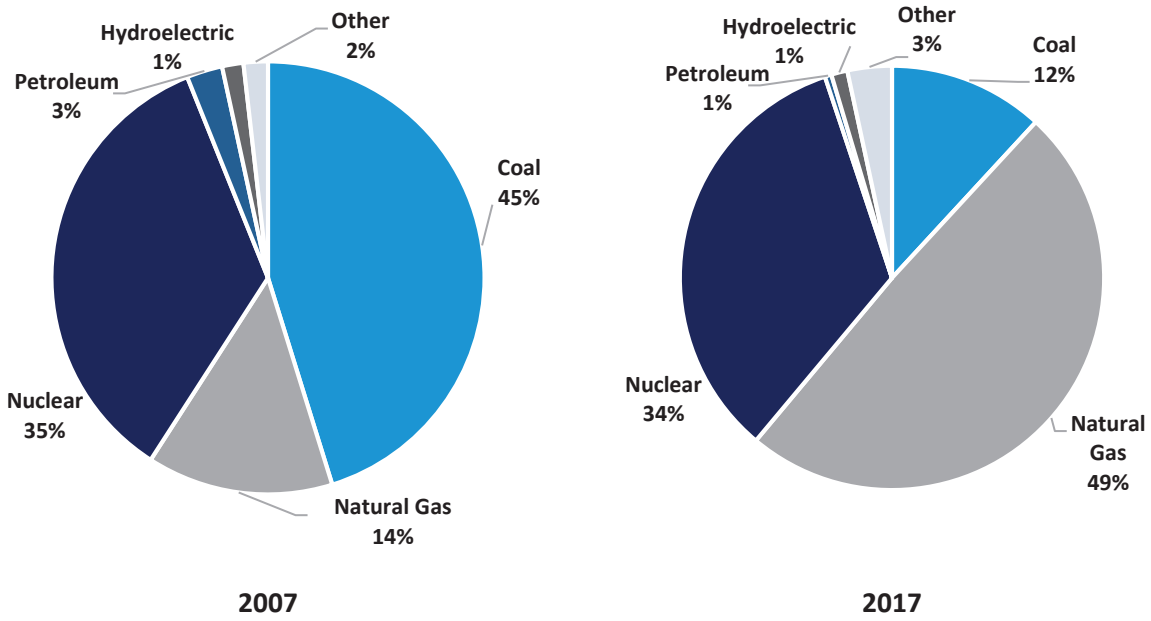
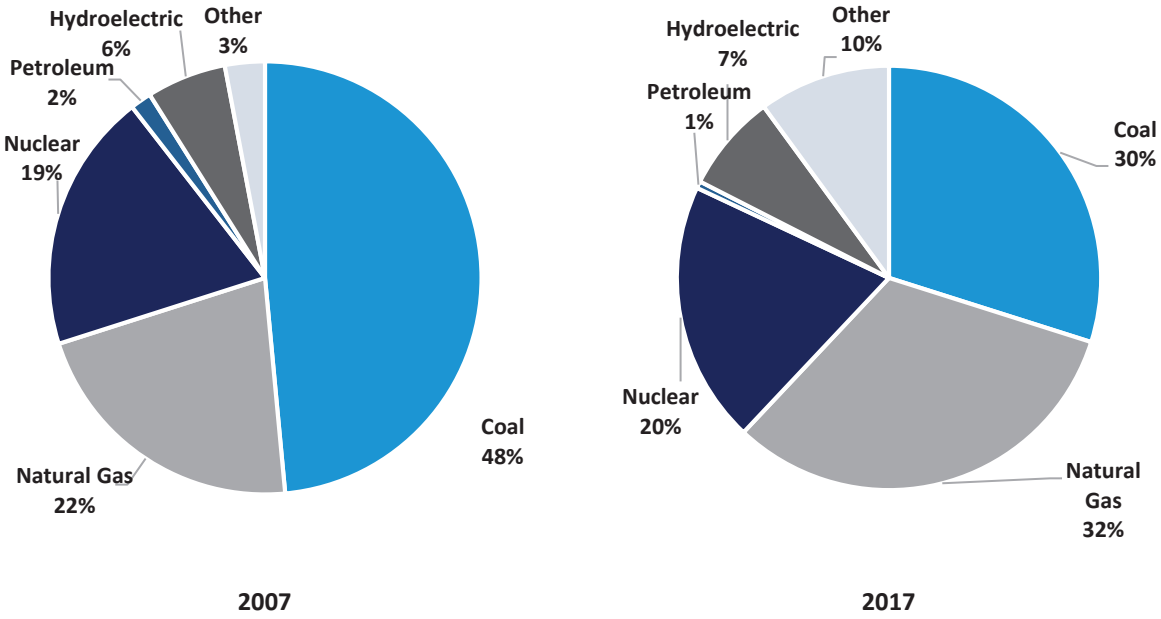


Figure 3 provides similar data for the U.S. as a whole. A quick comparison of Figures 2 and 3 shows similarities, even though the degree of reliance on specific energy sources for electricity production is quite different. Nationally, as in Virginia, the most pronounced trend between 2007 and 2017 was that cleaner-burning low-emissions energy sources replaced high-emissions sources over the period. Where coal accounted for 48 percent of all electricity production nationwide in 2007, by 2017 that proportion had fallen to 30 percent. While at the other end of the spectrum, where natural gas accounted for 22 percent of electricity production nationally in 2007, by 2017 that figure had grown to 32 percent.

One notable difference between the national trends represented in Figure 3 and the Virginia trends represented in Figure 2, however, is in renewable energy (included in the *Other* category). Where nationally the combined contribution of solar and wind power to electricity production increased from 0.8 percent in 2007 to 7.6 percent in 2017, in Virginia, the contribution of these two renewable energy sources only increased from zero percent in 2007 to 0.3 percent in 2017.

[3] Data Source: U.S. Energy Information Administration.

Figure 3: Electricity Generation in the U.S. by Energy Source[4]

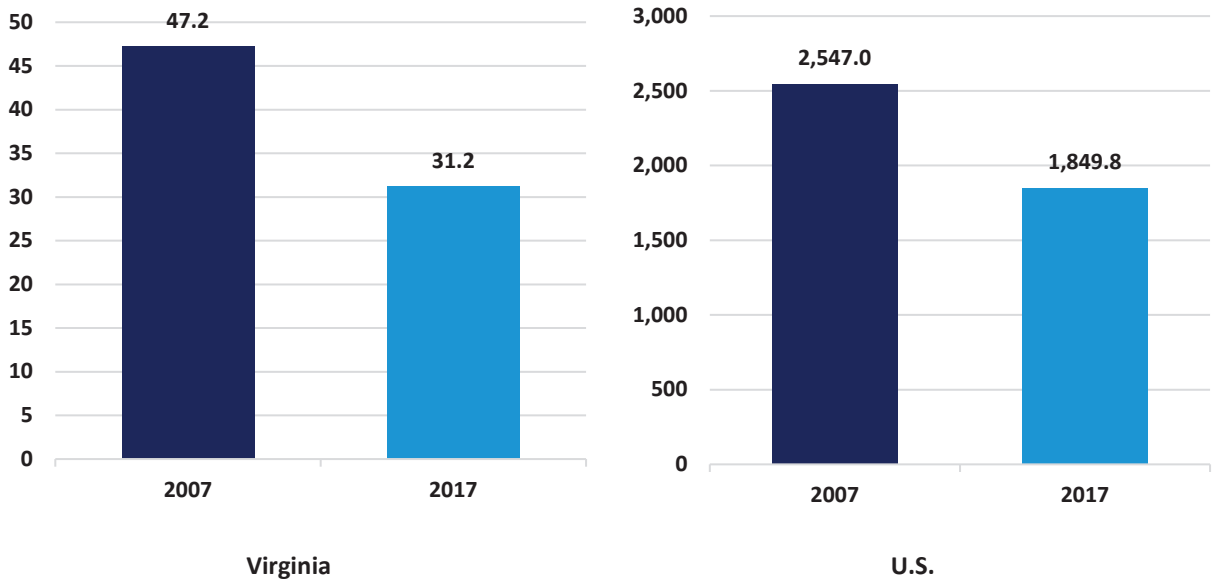


Impact on the Environment

In discussing the impact of these trends on the environment, it is important to realize that electricity production is the U.S.'s largest source of greenhouse gas emissions. Figure 4 depicts carbon dioxide emissions from electricity production in 2007 and 2017 for both Virginia and the U.S. As these data indicate, between 2007 and 2017, as the share of electricity produced in Virginia by coal fell from 45 to 12 percent, carbon dioxide emissions from electricity production fell from 47.2 to 31.2 million metric tons. Where at the national level, as the share of electricity produced by coal fell from 48 to 30 percent, carbon dioxide emissions from electricity production fell from 2,547.0 to 1,849.8 million metric tons.

[4] Data Source: U.S. Energy Information Administration.

Figure 4: Carbon Dioxide Emissions from Electricity Production (millions of metric tons)[5]



Local Economic Profile

In this section, we provide a context for the economic and fiscal impact assessments to follow by profiling the local economies of the Counties of Isle of Wight and Surry.

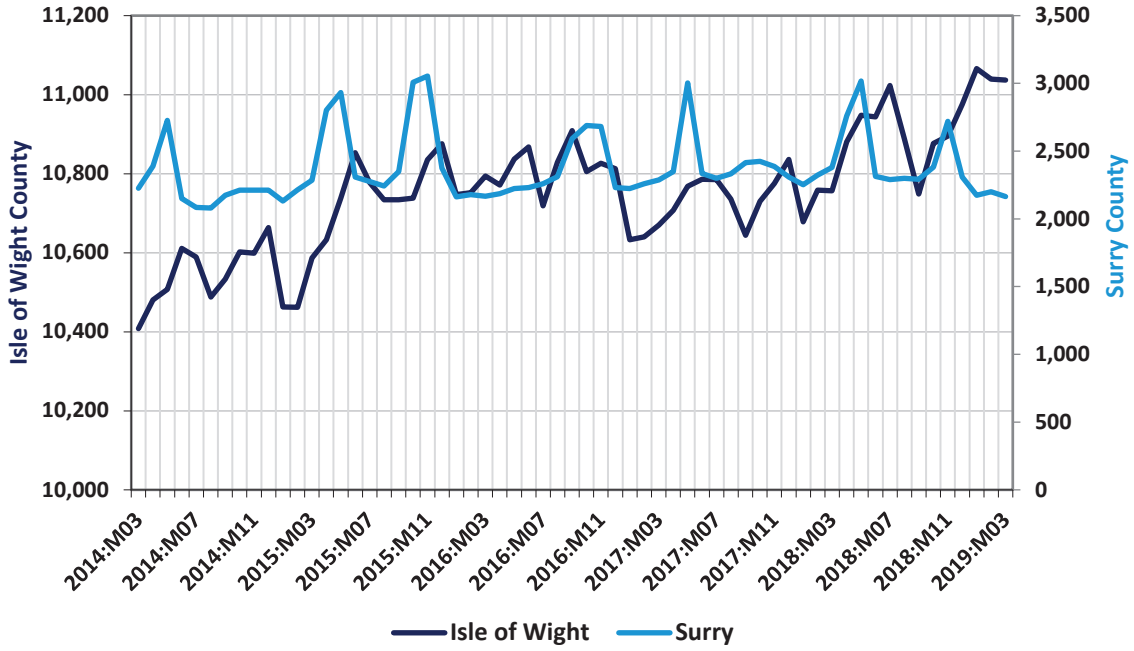
Total Employment

Figure 5 depicts the trend in total employment in the Counties of Isle of Wight and Surry from March 2014 to March of 2019. As these data show, employment in Isle of Wight County slowly trended upward and employment in Surry County remained about the same aside from seasonal variation. As of March 2019, county employment stood at 11,037 jobs in Isle of Wight and 2,164 jobs in Surry. This represents a 629 job, or 6.0 percent, increase in employment over the period as a whole for Isle of Wight County and a -63 job, or -2.8 percent, decrease for Surry County. To put this number in perspective, over this same period total statewide employment in Virginia increased by 8.0 percent.[6]

[5] Data Source: U.S. Energy Information Administration.

[6] Data Source: U.S. Bureau of Labor Statistics.

Figure 5: Total Employment in the Counties of Isle of Wight and Surry – March 2014 to March 2019[7]



Employment and Wages by Major Industry Sector

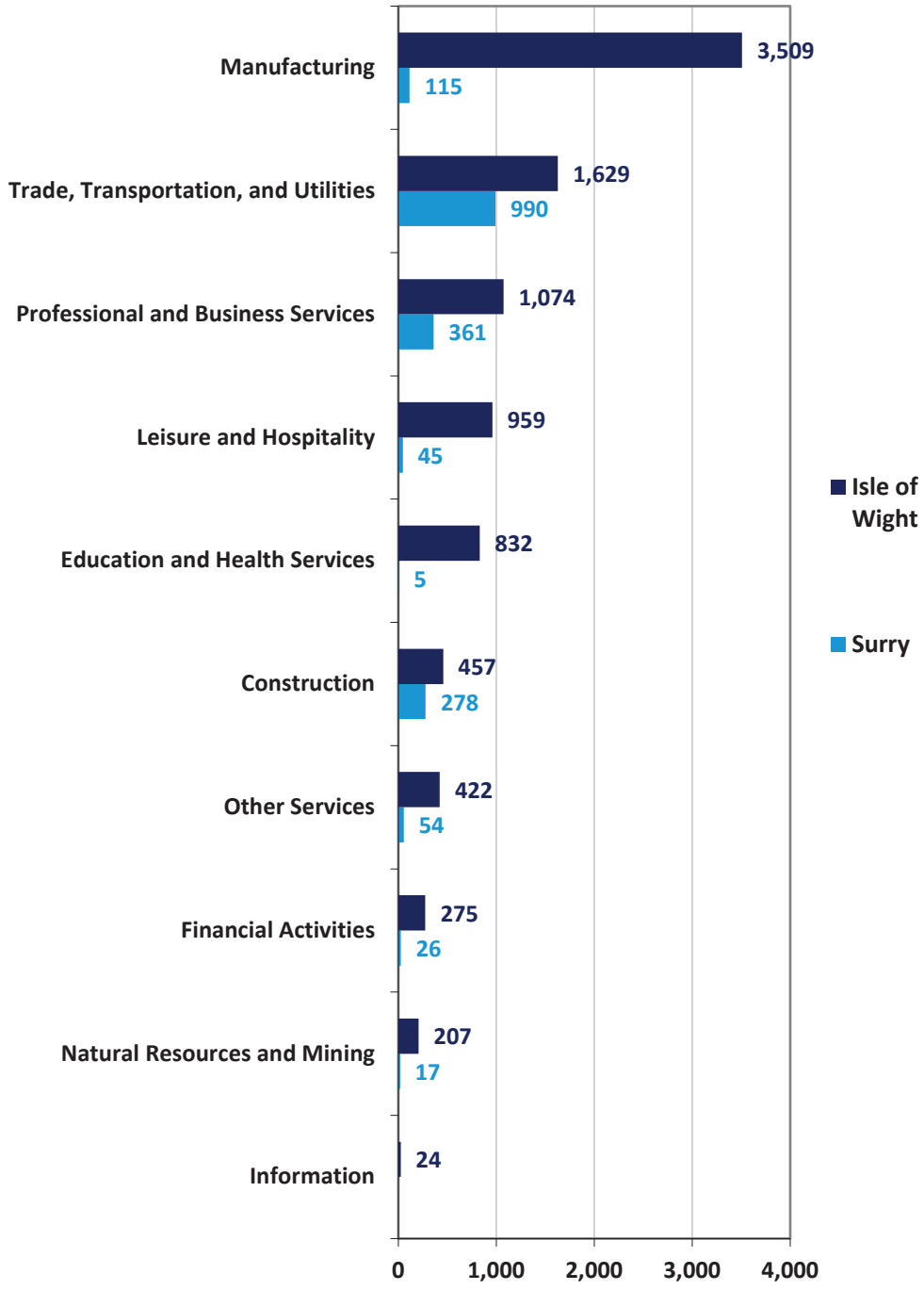
To provide a better understanding of the underlying factors motivating the total employment trends depicted in Figure 5, Figures 6 through 8 provide data on private employment and wages by major industry sector in the Counties of Isle of Wight and Surry.

Figure 6 depicts the distribution of private sector employment across major industry categories in the Counties of Isle of Wight and Surry in 2018. In Isle of Wight County, the largest employment sector that year was Manufacturing (3,509 jobs), followed by Trade, Transportation, and Utilities (1,629 jobs) and Professional and Business Services (1,074 jobs). In Surry County, the largest employment sector that year was Trade, Transportation, and Utilities (990 jobs), followed by Professional and Business Services (361 jobs) and Construction (278 jobs).[8]

[7] Data Source: U.S. Bureau of Labor Statistics.

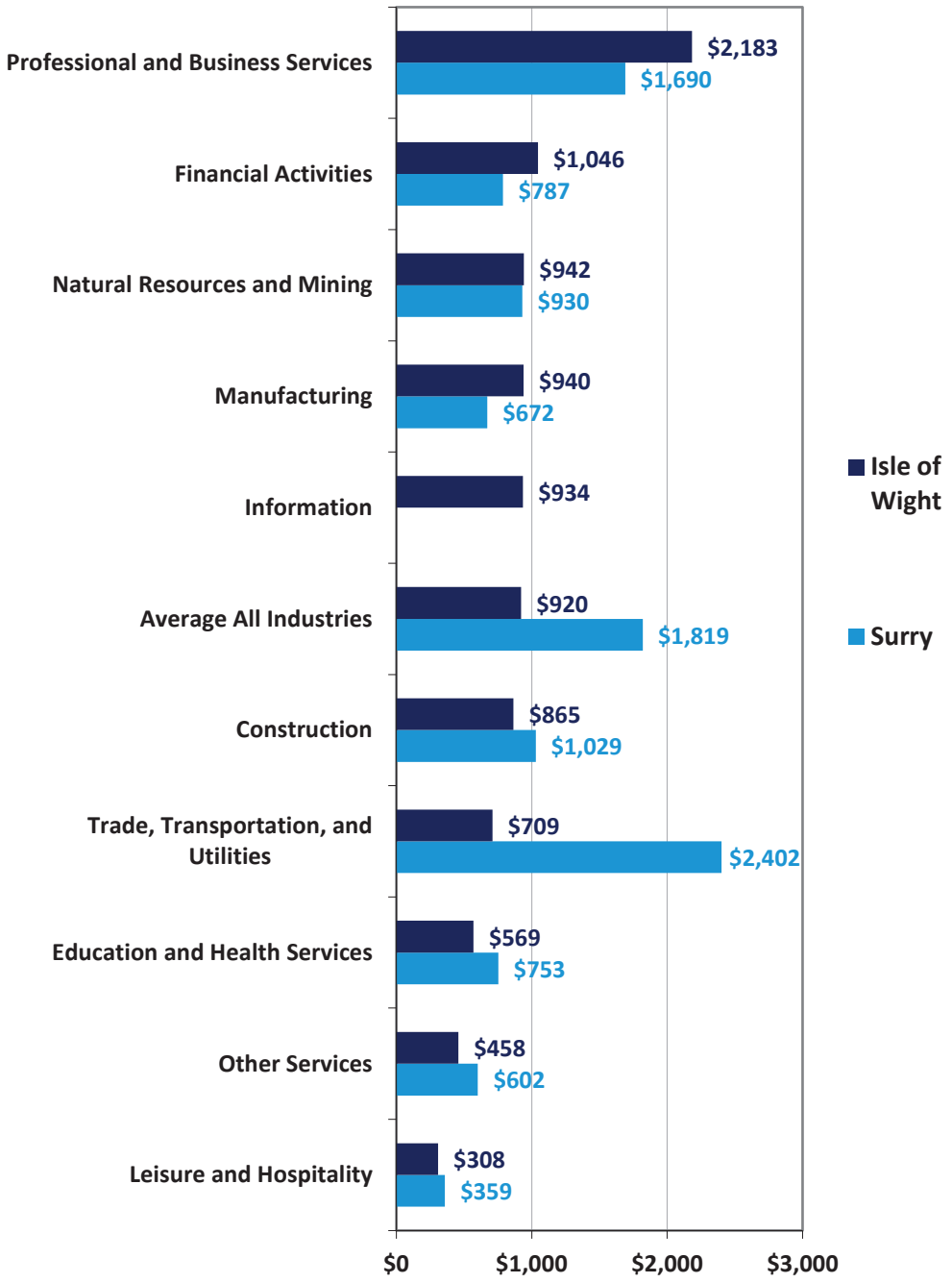
[8] The reader should note that data for the Information sector are suppressed in Surry County due to data confidentiality. As a result, the ordinal ranking of employment by sector presented here for Surry County is based on partial and incomplete data.

Figure 6: Private Employment by Major Industry Sector in the Counties of Isle of Wight and Surry in 2018[9]



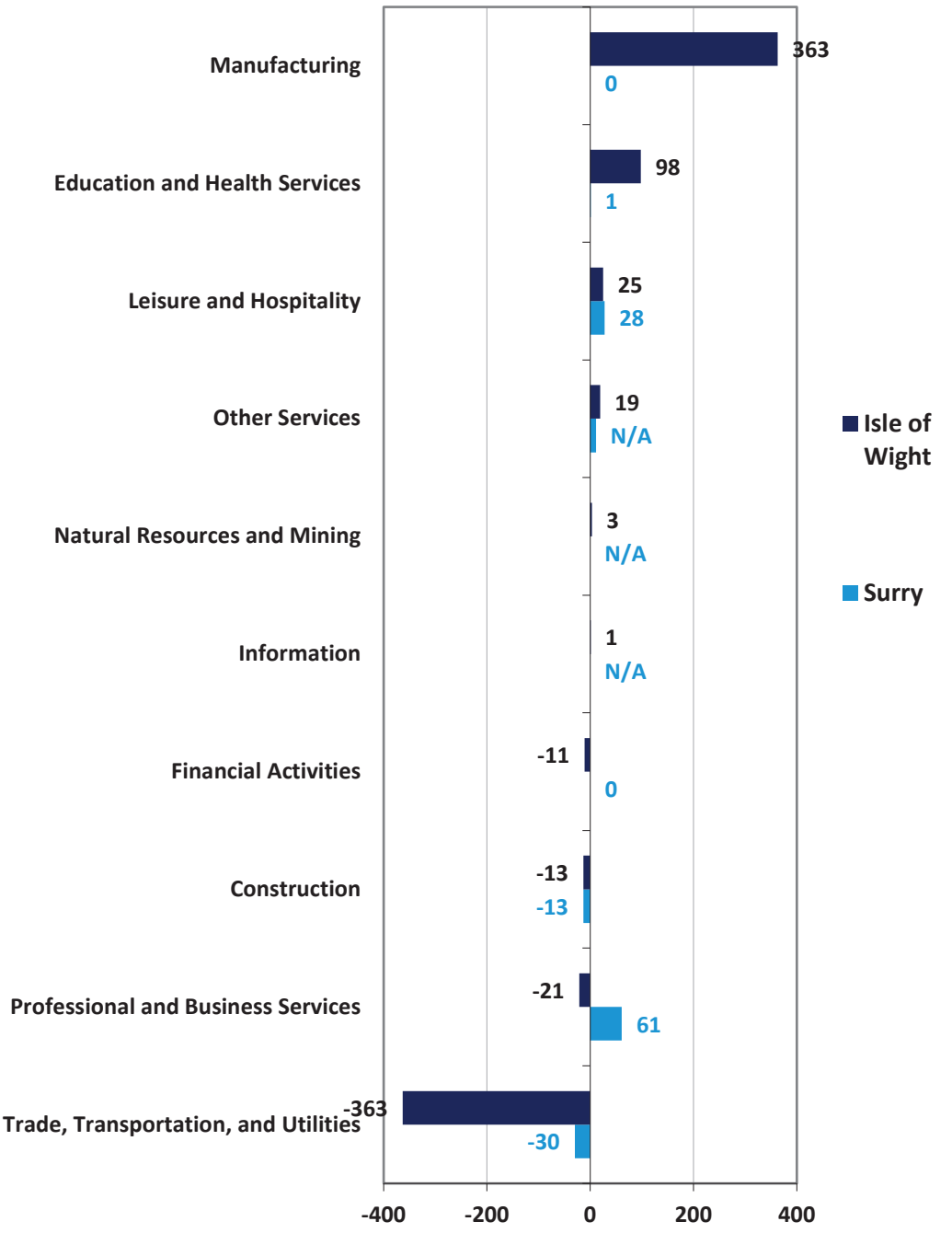
[9] Data Source: U.S. Bureau of Labor Statistics. Data for the Information sector are suppressed in Surry County due to data confidentiality.

Figure 7: Average Private Weekly Wages by Major Industry Sector in the Counties of Isle of Wight and Surry in 2018[10]



[10] Data Source: U.S. Bureau of Labor Statistics. Data for the Information sector are suppressed in Surry County due to data confidentiality.

Figure 8: Change in Private Employment by Major Industry Sector in the Counties of Isle of Wight and Surry from 2017 to 2018[11]



[11] Data Source: U.S. Bureau of Labor Statistics. Data for the Information; Manufacturing; and Trade, Transportation and Utilities sectors are suppressed in Surry County due to data confidentiality.

Figure 7 provides a similar ranking for private sector average weekly wages by major industry category. In Isle of Wight County, the highest paying industry sector in 2018 was Professional and Business Services ($2,183 per week), followed by Financial Activities ($1,046 per week) and Natural Resources and Mining ($942 per week). While in Surry County, the highest paying industry sector that year was Trade, Transportation, and Utilities ($2,402 per week), followed by Professional and Business Services ($1,690 per week) and Construction ($1,029 per week). To provide a point of reference, the average private sector weekly wages across all industries in Isle of Wight County in 2018 were $920 per week, and $1,819 per week in Surry County.[12]

Lastly, Figure 8 details the year-over-year change in private sector employment between 2017 and 2018 by major industry sector in the Counties of Isle of Wight and Surry. Over this period, in Isle of Wight County the largest employment gain occurred in the Manufacturing sector (up 363 jobs) and the largest employment loss occurred in the Trade, Transportation, and Utilities sector (down 363 jobs), while in Surry County the largest employment gain occurred in the Professional, and Business Services sector (up 61 jobs) and the largest employment loss occurred in the Trade, Transportation, and Utilities sector (down 30 jobs).[13]

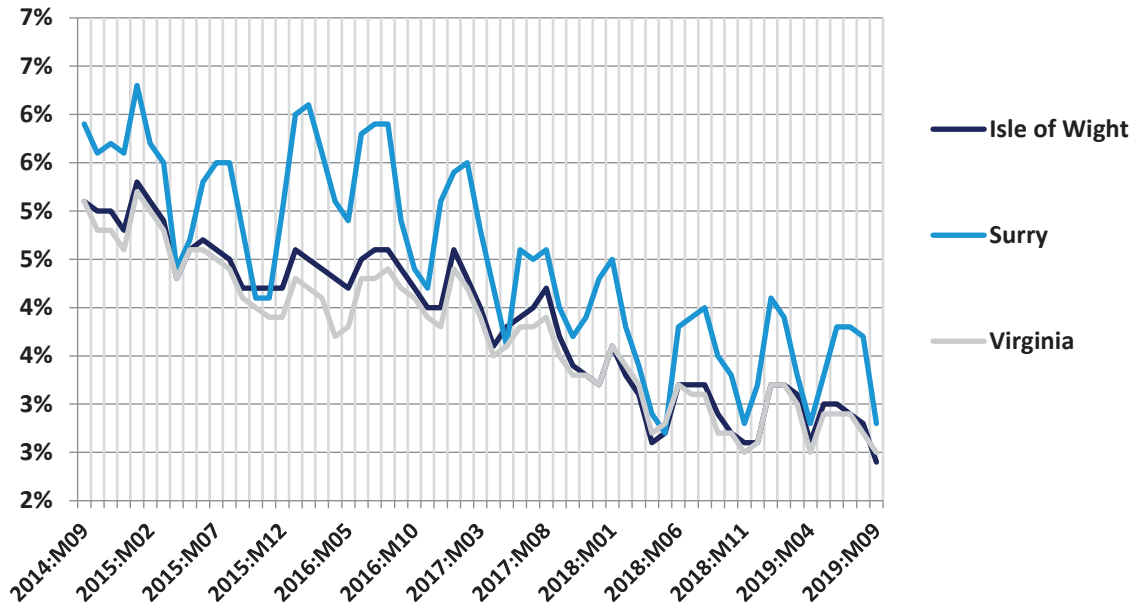
Unemployment

Figure 9 illustrates the unemployment trend in the Counties of Isle of Wight and Surry over the five-year period from September 2014 through September 2019 and benchmarks those data against the statewide trend for Virginia. As these data show, unemployment rates in Isle of Wight County generally tracked closely to the statewide norm, while unemployment rates in Surry County were typically four-fifths of a percent above the statewide norm. As of September 2019, unemployment stood at 2.4 percent in Isle of Wight County, 2.8 percent in Surry County, and 2.5 percent in Virginia as a whole.

[12] The reader should note that data for the Information sector are suppressed in Surry County due to data confidentiality. As a result, the ordinal ranking of average weekly wages by sector, and the average weekly wage across all sectors, presented here for Surry County is based on partial and incomplete data.

[13] The reader should note that data for the Information; Manufacturing; and Trade, Transportation and Utilities sectors are suppressed in Surry County due to data confidentiality. As a result, the ordinal ranking of employment gains/losses between 2017 and 2018 by sector presented here for Surry County is based on partial and incomplete data.

Figure 10: Unemployment Rate – September 2014 to September 2019[14]



Economic and Fiscal Impact

In this section, we quantify the economic and fiscal contribution that the proposed Cavalier Solar project would make to the Counties of Isle of Wight and Surry. Our analysis separately evaluates the one-time pulse of economic activity that would occur during the construction phase of the project, as well as the annual economic activity that the project would generate during its ongoing operations phase.

Method

To empirically evaluate the likely local economic impact attributable to the proposed Cavalier Solar project, we employ a regional economic impact model called IMPLAN.[15] The IMPLAN model is one of the most commonly used economic impact simulation models in the U.S., and in Virginia is used by UVA's Weldon Cooper Center, the Virginia Department of Planning and Budget, the Virginia Employment Commission, and other state agencies and research institutes. Like all economic impact models, the IMPLAN model uses economic multipliers to quantify economic impact.

Economic multipliers measure the ripple effects that an expenditure generates as it makes its way through the economy. For example, as when the Cavalier Solar project purchases goods and services – or when its employees or contractors hired by the facility use their salaries and wages to make household purchases – thereby generating income for someone else, which is in turn spent, thereby

[14] Data Source: Bureau of Labor Statistics.

[15] IMPLAN v.3 is produced by Minnesota IMPLAN Group, Inc.

becoming income for yet someone else, and so on, and so on. Through this process, one dollar in expenditures generates multiple dollars of income. The mathematical relationship between the initial expenditure and the total income generated is the economic multiplier.

One of the primary advantages of the IMPLAN model is that it uses regional and national production and trade flow data to construct region-specific and industry-specific economic multipliers, which are then further adjusted to reflect anticipated actual spending patterns within the specific geographic study area that is being evaluated. As a result, the economic impact estimates produced by IMPLAN are not generic. They reflect as precisely as possible the economic realities of the specific industry, and the specific study area, being evaluated.

In the analysis that follows, these impact estimates are divided into three categories. First round direct impact measures the direct economic contribution of the entity being evaluated (e.g., own employment, wages paid, goods and services purchased by the Cavalier Solar project). Second round indirect and induced impact measures the economic ripple effects of this direct impact in terms of business to business, and household (employee) to business, transactions. Total impact is simply the sum of the preceding two. These categories of impact are then further defined in terms of employment (the jobs that are created), labor income (the wages and benefits associated with those jobs), and economic output (the total amount of economic activity that is created in the economy).

Construction Phase

In this portion of the section, we assess the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Cavalier Solar project would have on the Counties of Isle of Wight and Surry.

Assumptions

In conducting our analysis, we employ the following assumptions:

- For ease of analysis, all construction expenditures are assumed to take place in a single year.
- Total investment in the Cavalier Solar project is estimated to be $295.2 million.[16]

[16] Data Source: sPower.

- Of that total:
  - Architecture, engineering, site preparation, and other construction costs are estimated to be $136.8 million.[17] It is estimated that approximately 55 percent of that total would be spent with vendors in the Counties of Isle of Wight and Surry.[18]
  - Capital equipment costs are estimated to be $158.4 million.[19] It is anticipated that no capital equipment will be purchased from vendors in the Counties of Isle of Wight or Surry.[20]

Results

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Cavalier Solar project would directly provide a one-time pulse of approximately: 1) 656 full-time-equivalent jobs, 2) $26.1 million in labor income, and 3) $74.6 million in economic output to the Counties of Isle of Wight and Surry.

Taking into account the economic ripple effects that direct investment would generate, we estimate that the total one-time impact on the Counties of Isle of Wight and Surry would be: 1) 787 full-time-equivalent jobs, 2) $31.0 million in labor income, 3) $92.5 million in economic output, and 4) $2.7 million in state and local tax revenue.

Table 1: Estimated One-Time Economic and Fiscal Impact on the Counties of Isle of Wight and Surry from Construction of the Cavalier Solar Project (2019 Dollars)

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	656	$26,144,519	$74,639,992
2nd Round Indirect and Induced Economic Activity	131	$4,842,559	$17,837,262
Total Economic Activity	**787**	**$30,987,078**	**$92,477,254**
Fiscal Impact			
State and Local Tax Revenue			**$2,653,003**

**Totals may not sum due to rounding*

[17] Data Source: sPower.
[18] Data Source: IMPLAN.
[19] Data Source: sPower.
[20] Data Source: IMPLAN.

Ongoing Operations Phase

In this portion of the section, we assess the annual economic and fiscal impact that the proposed Cavalier Solar project would have on the Counties of Isle of Wight and Surry during its anticipated 35-year operational phase.

Assumptions

In conducting our analysis, we employ the following assumptions:

- The Cavalier Solar project would spend approximately $311,000 each year for general maintenance and repair.[21]
- The Cavalier Solar project would employ approximately six individuals locally for its electrical and vegetative maintenance operations, paying an estimated $276,640 in total salaries annually.[22]
- The Cavalier Solar project would involve a capital investment of $295.2 million in capital equipment and improvements to the existing property. About $225.0 million of that total would be invested in Surry County and $70.2 million in Isle of Wight County.[23]
- The Cavalier Solar project would be located on 1,077 acres in Surry County and on 340 acres in Isle of Wight County.
- The Cavalier Solar project would generate $28,039 in roll back taxes and $7,910 in annual real estate taxes in Isle of Wight County and $10,641 in annual real estate taxes in Surry County.[24]

Results – Economic Impact

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Cavalier Solar project would directly provide approximately: 1) 6 full-time-equivalent jobs, 2) $276,640 in labor income, and 3) $587,640 in economic output to the Counties of Isle of Wight and Surry. Taking into account the economic ripple effects that direct impact would generate, we estimate that the total annual impact on the Counties of Isle of Wight and Surry would be: 1) 9 full-time-equivalent jobs, 2) $374,397 in labor income, and 3) $991,440 in economic output.[25]

[21] Data Source: sPower.
[22] Data Source: sPower.
[23] Data Source: sPower.
[24] Data Source: Isle of Wight and Surry County real estate assessment databases.
[25] Includes impact of confidential lease payments to property owners.

Table 2: Estimated Annual Economic Impact on the Counties of Isle of Wight and Surry from the Ongoing Operation of the Cavalier Solar Project (2019 Dollars)

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	6	$276,640	$587,640
2nd Round Indirect and Induced Economic Activity	3	$97,757	$403,800
Total Economic Activity	**9**	**$374,397**	**$991,440**

**Totals may not sum due to rounding*

Results – Fiscal Impact in Isle of Wight County

In this portion of the section, we quantify the direct fiscal contribution that the proposed Cavalier Solar project would make to Isle of Wight County. It should be noted at the outset, however, that there are at least two reasons to assume that the analysis that follows understates the actual fiscal impact that the Cavalier Solar project would have on Isle of Wight County.

- First, our analysis only accounts for the increased real estate taxes associated with removing the affected parcels from the land use program. It does not account for the reassessment of the property from agricultural to industrial use, as the precise figures for those future assessments are not available.
- Second, our analysis only evaluates the direct fiscal impact that the Cavalier Solar project would have on Isle of Wight County. It does not take into account any additional tax revenue that would be generated as a result of the indirect economic activity attributable to the ongoing operation of the Cavalier Solar project.

County Revenue

Table 3 details the additional revenue that the proposed Cavalier Solar project would generate for Isle of Wight County over a 35-year period from the increased property value assessments associated with simply reclassifying the property out of the land use program. As the data in Table 3 indicate, we estimate the county real estate tax revenue from the project after reclassification to be approximately $7,910 per year, for a cumulative total of approximately $276,843 (2019 dollars) over the project's anticipated 35-year operational life expectancy.[26] Adding one-time rollback taxes of $28,039 increases that cumulative total to $304,882.[27] In contrast, the property currently generates approximately $2,302 per year in real estate tax revenue for the county, for a cumulative total of approximately $80,568 (2019 dollars) over 35-years.[28]

[26] Data Source: Isle of Wight County real estate assessment database.
[27] Data Source: Isle of Wight County real estate assessment database.
[28] Data Source: Isle of Wight County real estate assessment database.

Table 3: Estimated Revenue Generated by the Proposed Cavalier Solar project over 35-Years from Real Estate Taxes in Isle of Wight County (2019 Dollars)

Estimated Increased Appraised Value of Property	$930,564
Isle of Wight County Real Estate Tax Rate	0.0085
Annual County Real Estate Tax	$7,910
Cumulative Real Estate Tax Revenue over 35-years*	**$276,843**
One-Time Rollback Taxes	$28,039
TOTAL Cumulative Real Estate Tax Revenue over 35-years*	**$304,882**

**Totals may not sum due to rounding.*

Table 4 separately details the additional annual revenue that the proposed Cavalier Solar project would generate for Isle of Wight County over a 35-year period from taxes levied on capital investment. This calculation is based on: 1) the taxable portion of capital investments subject to the 80 percent local tax exemption pursuant to Virginia Code § 58.1-3660, times 2) the State Corporation Commission's 2019 0.902 utility assessment ratio for taxation of public utilities in Isle of Wight County, times 4) the State Corporation Commission's depreciation guidelines for solar facilities, times 5) Isle of Wight County's real property tax rate of $0.85 per $100 of assessed value pursuant to Virginia Code § 58.1-2606.

As the data In Table 4 indicate, based on these calculations, we estimate that the additional county revenue from taxation of capital investments associated with the proposed Cavalier Solar project would be approximately $96,940 in the project's first year of operation, with that figure projected to gradually decline to approximately $10,771 in the project's 35th year of operation, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately $1.7 million (2019 dollars).

Table 4: Estimated Revenue Generated by the Proposed Cavalier Solar project over 35-Years from Taxes on Capital Investment in Isle of Wight County (2019 Dollars)

Year	Total Capital Investment subject to 80% exemption[29]	Less 80% exemption (A)[30]	Depreciation[31]	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment[32]
1	$70,243,132	$12,671,861	90%	$11,404,675	$96,940
2	$70,243,132	$12,671,861	90%	$11,404,675	$96,940
3	$70,243,132	$12,671,861	90%	$11,404,675	$96,940
4	$70,243,132	$12,671,861	90%	$11,404,675	$96,940
5	$70,243,132	$12,671,861	90%	$11,404,675	$96,940
6	$70,243,132	$12,671,861	87%	$11,024,519	$93,708
7	$70,243,132	$12,671,861	85%	$10,771,082	$91,554
8	$70,243,132	$12,671,861	82%	$10,390,926	$88,323
9	$70,243,132	$12,671,861	79%	$10,010,770	$85,092
10	$70,243,132	$12,671,861	76%	$9,630,614	$81,860
11	$70,243,132	$12,671,861	73%	$9,250,459	$78,629
12	$70,243,132	$12,671,861	69%	$8,743,584	$74,320
13	$70,243,132	$12,671,861	66%	$8,363,428	$71,089
14	$70,243,132	$12,671,861	62%	$7,856,554	$66,781
15	$70,243,132	$12,671,861	58%	$7,349,679	$62,472
16	$70,243,132	$12,671,861	53%	$6,716,086	$57,087
17	$70,243,132	$12,671,861	49%	$6,209,212	$52,778
18	$70,243,132	$12,671,861	44%	$5,575,619	$47,393
19	$70,243,132	$12,671,861	38%	$4,815,307	$40,930

[29] Data Source: sPower.

[30] Calculated pursuant to Virginia Code § 58.1-3660 which stipulates that solar facilities over 20MW and under 150MW are subject to an 80 percent exemption from local property taxes.

[31] Data Source: State Corporation Commission guidelines.

[32] Calculated pursuant to Virginia Code § 58.1-2606 which stipulates that capital equipment owned by utilities is taxed as real property and the local tax rate on that capital equipment would be capped at Isle of Wight County's real property tax rate of $0.85 per $100 of assessed value.

Table 4: Estimated Revenue Generated by the Proposed Cavalier Solar project over 35-Years from Taxes on Capital Investment in Isle of Wight County (2019 Dollars)

Year	Total Capital Investment subject to 80% exemption[29]	Less 80% exemption (A)[30]	Depreciation[31]	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment[32]
20	$70,243,132	$12,671,861	33%	$4,181,714	$35,545
21	$70,243,132	$12,671,861	27%	$3,421,402	$29,082
22	$70,243,132	$12,671,861	21%	$2,661,091	$22,619
23	$70,243,132	$12,671,861	14%	$1,774,061	$15,080
24	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
25	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
26	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
27	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
28	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
29	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
30	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
31	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
32	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
33	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
34	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
35	$70,243,132	$12,671,861	10%	$1,267,186	$10,771
CUMULATIVE TOTAL					**$1,708,294**

Table 5 combines the results from the calculations depicted in Tables 3 and 4 to provide an estimate of the cumulative fiscal contribution that the proposed Cavalier Solar project would make to Isle of Wight County over its 35-year anticipated operational life. As these data indicate, that cumulative total is approximately $2.0 million (2019 dollars).

Table 5: Estimated Total Cumulative Tax Revenue from the Proposed Cavalier Solar project over 35-Years in Isle of Wight County (2019 Dollars)

Cumulative Real Estate Tax Revenue	$304,882
Cumulative Revenue from Taxation of Capital Investments	$1,708,294
TOTAL Cumulative County Revenue over 35-years*	**$2,013,176**

**Totals may not sum due to rounding.*

Composite Index

In this portion of the section we present an analysis of the hypothetical upper limit of the impact that the proposed Cavalier Solar project could have on Isle of Wight County's Composite Index, the index that the Virginia Department of Education uses to assess the locally funded portion of a locality's school budget based on "ability to pay." We include this analysis in our report because it has been a perceived issue in some localities in Virginia when proposed solar projects have been considered.

Each locality's Composite Index is based on three factors – the locality's total real property tax base, total adjusted real income, and total taxable retail sales. Of these, the total real property tax base receives the highest weight. Therefore, hypothetically, a large capital investment such as a solar facility could increase a locality's Composite Index and thereby increase the required local contribution to the county's school budget. However, there are two important issues to keep in mind when evaluating the likely impact of a solar project on a locality's Composite Index.

First, when calculating a locality's Composite Index, solar projects are treated no differently than manufacturing facilities, residential neighborhoods, or any other large capital investment. The part of the investment that is taxable is included in the real property tax base portion of the calculation. Pursuant to Virginia Code §58.1-3660, that means for solar facilities such as Cavalier Solar, the 20 percent of the investment that is taxable is considered in the Composite Index, and only that 20 percent.

Second, changes in a locality's Composite Index are driven by changes in a locality's total real property tax base (along with total adjusted real income and total taxable retail sales) relative to the changes in all Virginia localities total real property tax base (along with total adjusted real income and total taxable retail sales). As a result, for any one capital investment to have an impact on a locality's Composite Index, it would have to drive a percentage change in the locality's total real property tax base that was larger than the percentage change in the total real property tax base across all Virginia localities.

Between the Virginia Department of Education's 2018-20 and 2020-2022 Composite Index calculations, the total real property tax base across all Virginia localities increased by 7.3 percent. Even after accounting for both the capital investment in the project itself and the increased property value assessments associated with reclassifying the property out of land use, the proposed Cavalier Solar project would only drive a 0.3 percent increase in Isle of Wight County's total real property tax base. This means that, in and of itself, it is highly unlikely the proposed Cavalier Solar project would effect a meaningful change in Isle of Wight County's Composite Index.

County Revenue with Real Estate Assessments Adjusted for Industrial Use

As discussed at the beginning of this section, the county revenue estimate above only accounts for the increased real estate taxes associated with removing the affected parcels from the land use program. It does not account for the reassessment of the property from agricultural to industrial use, as the precise figures for those future assessments are not available. However, based on the experience of other Virginia counties it is reasonable to assume that those future assessments could be in the neighborhood of $10,000 per acre.

If that were the case, it would raise the appraised value of the affected parcels from the $930,564 used as a starting point for the analysis presented in Table 3, to the $3.4 million used as a starting point below in Table 6. As shown in Table 6, this would increase the county real estate tax revenue from the project to approximately $28,900 per year and the one-time rollback taxes to approximately $132,990, for a cumulative total of approximately $1.1 million (2019 dollars) over 35-years. Adding the approximately $1.7 million in cumulative county revenue from taxation of capital investments then brings the total cumulative county revenue from all sources over 35-years to approximately $2.9 million (2019 dollars).

Table 6: Potential Total Cumulative Tax Revenue from the Proposed Cavalier Solar project over 35-Years in Isle of Wight County (2019 Dollars) with Reassessment of Property for Industrial Use

Estimated Appraised Value of Property at $10,000 per Acre	$3,400,000
Isle of Wight County Real Estate Tax Rate	0.0085
Annual County Real Estate Tax	$28,900
Cumulative Real Estate Tax Revenue over 35-years*	**$1,011,500**
One-Time Rollback Taxes	$132,990
TOTAL Cumulative Real Estate Tax Revenue over 35-years*	**$1,144,490**
Cumulative Revenue from Taxation of Capital Investments	$1,708,294
TOTAL Cumulative County Revenue over 35-years*	**$2,852,784**

**Totals may not sum due to rounding.*

Results – Fiscal Impact in Surry County

In this portion of the section, we quantify the direct fiscal contribution that the proposed Cavalier Solar project would make to Surry County. It should be noted at the outset, however, that there are at least two reasons to assume that the analysis that follows understates the actual fiscal impact that the Cavalier Solar project would have on Surry County.

- First, our analysis does not account for the reassessment of the property from agricultural to industrial use, as the precise figures for those future assessments are not available.
- Second, our analysis only evaluates the direct fiscal impact that the Cavalier Solar project would have on Surry County. It does not take into account any additional tax revenue that would be generated as a result of the indirect economic activity attributable to the ongoing operation of the Cavalier Solar project.

County Revenue

Table 7 details the property tax revenue that the proposed Cavalier Solar project would generate for Surry County over its anticipated 35-year operational life. Because Surry County does not participate in the land use program, there are no assessment increases associated with withdrawing the property from that program, nor are there any rollback taxes associated with the project. As the data in Table 7 indicate, we estimate the county real estate tax revenue from the project to be approximately $10,641 per year, for a cumulative total of approximately $372,429 (2019 dollars) over the project's anticipated 35-year operational life expectancy.[33]

Table 7: Estimated Revenue Generated by the Proposed Cavalier Solar Project over 35-Years from Real Estate Taxes in Surry County (2019 Dollars)

Estimated Appraised Value of Property	$1,498,706
Surry County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax	$10,641
Cumulative Real Estate Tax Revenue over 35-years*	**$372,429**

**Totals may not sum due to rounding.*

Table 8 separately details the additional annual revenue that the proposed Cavalier Solar project would generate for Surry County over a 35-year period from taxes levied on capital investment. This calculation is based on: 1) the taxable portion of capital investments subject to the 80 percent local tax exemption pursuant to Virginia Code § 58.1-3660, times 2) the State Corporation Commission's 2019 0.989 utility assessment ratio for taxation of public utilities in Surry County, times 4) the State Corporation Commission's depreciation guidelines for solar facilities, times 5) Surry County's real property tax rate of $0.71 per $100 of assessed value pursuant to Virginia Code § 58.1-2606.

[33] Data Source: Surry County real estate assessment database.

As the data in Table 8 indicate, based on these calculations we estimate that the additional county revenue from taxation of capital investments associated with the proposed Cavalier Solar project would be approximately $284,346 in the project's first year of operation, with that figure projected to gradually decline to approximately $31,594 in the project's 35th year of operation, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately $5.0 million (2019 dollars).

Table 8: Estimated Revenue Generated by the Proposed Cavalier Solar Project over 35-Years from Taxes on Capital Investment in Surry County (2019 Dollars)

Year	Total Capital Investment subject to 80% exemption[34]	Less 80% exemption (A)[35]	Depreciation[36]	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment[37]
1	$224,967,868	$44,498,644	90%	$40,048,780	$284,346
2	$224,967,868	$44,498,644	90%	$40,048,780	$284,346
3	$224,967,868	$44,498,644	90%	$40,048,780	$284,346
4	$224,967,868	$44,498,644	90%	$40,048,780	$284,346
5	$224,967,868	$44,498,644	90%	$40,048,780	$284,346
6	$224,967,868	$44,498,644	87%	$38,713,821	$274,868
7	$224,967,868	$44,498,644	85%	$37,823,848	$268,549
8	$224,967,868	$44,498,644	82%	$36,488,888	$259,071
9	$224,967,868	$44,498,644	79%	$35,153,929	$249,593
10	$224,967,868	$44,498,644	76%	$33,818,970	$240,115
11	$224,967,868	$44,498,644	73%	$32,484,010	$230,636
12	$224,967,868	$44,498,644	69%	$30,704,065	$217,999
13	$224,967,868	$44,498,644	66%	$29,369,105	$208,521
14	$224,967,868	$44,498,644	62%	$27,589,159	$195,883
15	$224,967,868	$44,498,644	58%	$25,809,214	$183,245
16	$224,967,868	$44,498,644	53%	$23,584,281	$167,448
17	$224,967,868	$44,498,644	49%	$21,804,336	$154,811
18	$224,967,868	$44,498,644	44%	$19,579,404	$139,014

[34] Data Source: sPower.

[35] Calculated pursuant to Virginia Code § 58.1-3660 which stipulates that solar facilities over 20MW and under 150MW are subject to an 80 percent exemption from local property taxes.

[36] Data Source: State Corporation Commission guidelines.

[37] Calculated pursuant to Virginia Code § 58.1-2606 which stipulates that capital equipment owned by utilities is taxed as real property and the local tax rate on that capital equipment would be capped at Surry County's real property tax rate of $0.71 per $100 of assessed value.

Table 8: Estimated Revenue Generated by the Proposed Cavalier Solar Project over 35-Years from Taxes on Capital Investment in Surry County (2019 Dollars)

Year	Total Capital Investment subject to 80% exemption[34]	Less 80% exemption (A)[35]	Depreciation[36]	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment[37]
19	$224,967,868	$44,498,644	38%	$16,909,485	$120,057
20	$224,967,868	$44,498,644	33%	$14,684,553	$104,260
21	$224,967,868	$44,498,644	27%	$12,014,634	$85,304
22	$224,967,868	$44,498,644	21%	$9,344,715	$66,347
23	$224,967,868	$44,498,644	14%	$6,229,810	$44,232
24	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
25	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
26	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
27	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
28	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
29	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
30	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
31	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
32	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
33	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
34	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
35	$224,967,868	$44,498,644	10%	$4,449,864	$31,594
CUMULATIVE TOTAL					**$5,010,814**

Table 9 combines the results from the calculations depicted in Tables 7 and 8 to provide an estimate of the cumulative fiscal contribution that the proposed Cavalier Solar project would make to Surry County over its 35-year anticipated operational life. As these data indicate, that cumulative total is approximately $5.4 million (2019 dollars).

Table 9: Estimated Total Cumulative Tax Revenue from the Proposed Cavalier Solar Project over 35-Years in Surry County (2019 Dollars)

Cumulative Real Estate Tax Revenue	$372,429
Cumulative Revenue from Taxation of Capital Investments	$5,010,814
TOTAL Cumulative County Revenue over 35-years*	**$5,383,243**

**Totals may not sum due to rounding.*

Composite Index

Surry County's Composite Index is capped by the Virginia Department of Education at 0.8000. As a result, the proposed Cavalier Solar project will have no effect on the locally funded portion of the county's school budget.

County Revenue with Real Estate Assessments Adjusted for Industrial Use

As discussed at the beginning of this section, the county revenue estimate above does not account for the reassessment of the property from agricultural to industrial use, as the precise figures for those future assessments are not available. However, based on recent actions by Surry County it is reasonable to assume that those future assessments could be in the neighborhood of $13,000 per acre.

If that were the case, it would raise the appraised value of the affected parcels from the $1.5 million used as a starting point for the analysis presented in Table 7, to the $14.0 million used as a starting point below in Table 10. As shown in table 10, this would increase the county real estate tax revenue from the project to approximately $99,407 per year, for a cumulative total of approximately $3.5 million (2019 dollars) over 35-years. Adding the approximately $5.0 million in cumulative county revenue from taxation of capital investments then brings the total cumulative county revenue from all sources over 35-years to approximately $8.5 million (2019 dollars).

Table 10: Potential Total Cumulative Tax Revenue from the Proposed Cavalier Solar project over 35-Years in Surry County (2019 Dollars) with Reassessment of Property for Industrial Use

Estimated Appraised Value of Property at $13,000 per Acre	$14,001,000
Surry County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax	$99,407
Cumulative Real Estate Tax Revenue over 35-years*	**$3,479,249**
Cumulative Revenue from Taxation of Capital Investments	$5,010,814
TOTAL Cumulative County Revenue over 35-years*	**$8,490,063**

**Totals may not sum due to rounding.*

Current Agricultural Use

In this section, we provide a benchmark for the previous estimates of the economic contribution that the proposed Cavalier Solar project would make to the counties of Isle of Wight and Surry by estimating the economic contribution that the site makes in its current agricultural use. In conducting that analysis, we employ the following assumptions:

- The proposed Cavalier solar project would be situated on an approximately 1,417-acre tract of land of which 1,077 acres are located in Surry County and 340 acres in Isle of Wight.
- Weighted average annual revenue per acre for Isle of Wight and Surry County farmland is approximately $678.48[38]
- Real property tax payments by current landowners are approximately $2,302 each year in Isle of Wight County and $10,641 each year in Surry County.[39]

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic and fiscal impact. As shown in Table 12, in its current agricultural use we estimate that the proposed Cavalier solar project site directly provides approximately: 1) 20 full-time-equivalent jobs, 2) $127,884 in labor income, and 3) $961,407 in economic output to the Counties of Isle of Wight and Surry. Taking into account the economic ripple effects that direct impact generates, we estimate that the total annual impact on the two counties is: 1) 23 full-time-equivalent jobs, 2) $281,924 in labor income, 3) $1,315,580 in economic output, and 4) $2,302 in direct real property tax payments to Isle of Wight County, for a cumulative total of $80,568 over 35-years and $10,641 in direct real property tax payments to Surry County for a cumulative total of $372,429 over 35-years.

[38] Data Source: U.S. Department of Agriculture 2017 Census.

[39] Data Source: Isle of Wight County and Surry County Commissioner of the Revenue.

Table 12: Total Annual Economic Impact of the Cavalier Solar Project Site on the Counties of Isle of Wight and Surry – Current Agricultural Use (2019 Dollars)

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	20	$127,884	$961,407
2nd Round Indirect and Induced Economic Activity	3	$154,040	$354,173
Total Economic Activity	**23**	**$281,924**	**$1,315,580**
Fiscal Impact			
Local Tax Revenue – Isle of Wight County			**$2,302**
Cumulative Local Tax Revenue over 35-Years in Isle of Wight County			**$80,568**
Local Tax Revenue – Surry County			**$10,641**
Cumulative Local Tax Revenue over 35-Years in Surry County			**$372,429**

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

Exhibit L –DHR Phase 1 Response Letter Dec 23, 2020

COMMONWEALTH of VIRGINIA

Matt Strickler
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

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December 23, 2020

J. Hope Smith, PhD
Dutton + Associates, LLC
1115 Crowder Dr.
Midlothian, VA 23113

RE: Cavalier Solar Project
Isle of Wight and Surry Counties, Virginia
DHR File No. 2020-0521

Dear Dr. Smith:

We have received for review the *Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area, Isle of Wight and Surry Counties, Virginia,* prepared by Dutton + Associated (D+A) on behalf of sPower. We provide the following comments in support of an application to the State Corporation Commission process (SCC) to construct and operate a solar project in Isle of Wight and Surry Counties.

Archaeology
The report documents a cultural resources survey of approximately 5,204 acres. During the course of the survey, twenty-seven (27) new archaeological sites (44SY0303-44SY0326 *inclusive* and 44IW0316-44IW0317) were identified.

Twenty-five (25) out of the twenty-seven (27) sites were found to be greatly disturbed by logging or were considered too ephemeral to yield additional significant data. D+A recommends the following sites as *not eligible* for listing in Virginia Landmarks Register (VLR) and National Register of Historic Places (NRHP): **44SY0303-44SY308, 44SY311-44SY0326,** and **44IW0316-44IW0317.** No further work is recommended at those sites.

44SY0309 consists of a dense scatter of late-nineteenth through early-twentieth century artifacts and is relatively undisturbed. It was considered the best surviving example of a farmstead within this vanished community. D+A recommends **44SY0309** as *potentially eligible* for listing in the VLR/NRHP. D+A recommends avoidance. If avoidance is not possible, Phase II evaluation to determine the extent and integrity of the deposits is recommended.

44SY0310, consisted of a small scatter of late-eighteenth through late nineteenth century domestic materials, a possible brick features, and a single grave dating to 1829. Due to presence of the grave and the early date of the materials, **44SY0310** as *potentially eligible* for listing in the VLR/NRHP. Avoidance or Phase II evaluation is

recommended. Avoidance with a 100 foot buffer is recommended for the grave. If avoidance is not possible, delineation of the area around the grave to identify the limits of the burials is recommended.

Recommendations for two (2) cemeteries within the project area (DHR ID #s 090-5171 and 090-5172) are included in the architecture summary. However, there are two possible cemeteries that were noted on maps or identified through oral history. These locations did not receive site numbers due to their lack of surface features. D+A recommends avoidance with a 100 foot buffer or further delineation. Please see the following table for all eligibility and impact recommendations.

Architecture

The architectural survey identified nine (9) previously recorded resources and forty-nine (49) newly identified resources within the 0.5-mile study area. Eleven (11) of the surveyed resources are within the project area. Three (3) of the previously recorded resources have been demolished since they were last surveyed. One (1) has been relocated out of survey area and renumbered (DHR ID #046-0067 now #046-5258). We concur with all D+A's eligibility recommendations.

We do not have enough information to concur that there will only be moderate impacts to the potentially eligible Jones House (DHR ID #046-0065) located at 9355 Burwells Bay Road. While we understand that transmission lines are visible from the property, they are seen from a distance and those alone do not diminish the integrity of setting enough to damage the qualities that make the resource potentially eligible. Placing solar panels so close to the home and then enclosing the home site with a vegetative buffer where there were once open fields, has the potential to be a severe impact. Please provide more details on the planting plan, such as types of plants, where they will be specifically planted, age of the plants to be installed, projected growth size over the next few years, whether they will maintain adequate cover in all seasons and whether they are native species. Renderings of the view from the house after the plants are installed would be helpful. Once we have a more comprehensive understanding of the planting plan minimization measures, we can discuss mitigation.

Additionally, the report does not specify a setback or any treatment considerations for the two (2) cemeteries within the project area (DHR ID #s 090-5171 and 090-5172). Unless we are confident in the horizontal limits of human burials, we generally recommend no less that a 50- to 100-foot buffer around cemeteries. Please confirm the cemetery buffers and that these areas will be demarcated during construction. Please see the following table for all eligibility and impact recommendations.

If you have any questions regarding these comments, please contact me at 804-482-8091 or via email, jennifer.bellville-marrion@dhr.virginia.gov.

Sincerely,

Jenny Bellville-Marrion, Project Review Archaeologist
Review and Compliance Division

c. David Dutton, D+A
Chris Egghart, DEQ

ATTACHMENT
December 23, 2020
DHR File No. 2020-0521

VDHR ID#	Consultant Eligibility	DHR Comment
44SY0303/ 090-5171	Not Eligible; No further work	Concur; Avoid Cemetery with 100ft buffer or delineation
44SY0304	Not Eligible; No further work	Concur; No further work
44SY0305	Not Eligible; No further work	Concur; No further work
44SY0306	Not Eligible; No further work	Concur; No further work
44SY0307	Not Eligible; No further work	Concur; No further work
44SY0308	Not Eligible; No further work	Concur; No further work
44SY0309	Potentially Eligible	Concur; Avoid or PHII
44SY0310/ 090-5172	Potentially Eligible	Concur; Avoid or PHII. Avoid Cemetery with 100ft buffer or delineation
44SY0311	Not Eligible; No further work	Concur; No further work
44SY0312	Not Eligible; No further work	Concur; No further work
44SY0313	Not Eligible; No further work	Concur; No further work
44SY0314	Not Eligible; No further work	Concur; No further work
44SY0315	Not Eligible; No further work	Concur; No further work
44SY0316	Not Eligible; No further work	Concur; No further work
44SY0317	Not Eligible; No further work	Concur; No further work
44SY0318	Not Eligible; No further work	Concur; No further work
44SY0319	Not Eligible; No further work	Concur; No further work
44SY0320	Not Eligible; No further work	Concur; No further work
44SY0321	Not Eligible; No further work	Concur; No further work
44SY0322	Not Eligible; No further work	Concur; No further work
44SY0323	Not Eligible; No further work	Concur; No further work
44SY0324	Not Eligible; No further work	Concur; No further work
44SY0325	Not Eligible; No further work	Concur; No further work
44SY0326	Not Eligible; No further work	Concur; No further work
44IW0316	Not Eligible; No further work	Concur; No further work
44IW0317	Not Eligible; No further work	Concur; No further work

VDHR ID#	Resource Name/Address	Year Built	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
046-0064	Carroll House, 11150 Burwells Bay Road	c.1812	VDHR: NRHP-Eligible	Eligible	Minimal	Minimal
046-0065	Jones House, 9355 Burwells Bay Road	1780	D+A: Potentially NRHP-Eligible	Potentially Eligible	**Moderate**	**Moderate or Severe- More Information Needed**
046-0066	Gale Farm, 9310 Jones Drive	1798	D+A: Potentially NRHP-Eligible	Potentially Eligible	Minimal	Minimal
046-0067	Pons House, 12170 Modest Neck Road	1833	D+A: Relocated outside of the survey area and now renumbered #046-5258. Not Evaluated as part of this effort	Not Evaluated as part of this effort	N/A	N/A
046-0069	Delk Farm, 10114 Mill Swamp Road	1775	D+A: Potentially	Potentially Eligible	Minimal	Minimal

TABLE KEY:	Warrants Mitigation	Needs Attention	**DHR does not concur**

VDHR ID#	Resource Name/Address	Year Built	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
			NRHP-Eligible			
046-5548	House, 10522 Burwells Bay Road	1900	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5549	House, 7027 Mullet Drive	1920	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5550	House, 10126 White Hill Trail	1890	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5551	House, 10106 White Hill Trail	1944	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5552	House, 10088 White Hill Trail	c.1930	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5553	House, 9621 Burwells Bay Road	1933	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5554	House, 10338 Burwells Bay Road	1940	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5555	House, 9352 Burwells Bay Road	1957	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5556	House, 9527 Mill Swamp Road	1927	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5557	House, 9580 Mill Swamp Road	1900	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5558	House, 8396 James Wilson Way	1898	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5559	House, 8324 James Wilson Way	1959	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5560	House, 10382 Mill Swamp Road	1935	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5561	House, 11050 Mill Swamp Road	1862	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5562	House, 11100 Mill Swamp Road	1956	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5563	House, 11128 Mill Swamp Road	1941	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5564	House, 11292 Mill Swamp Road	1951	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5565	House, 11301 Mill Swamp Road	1949	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5566	House, 11231 Mill Swamp Road	1790	D+A: Potentially NRHP-Eligible	Potentially Eligible	Minimal	Minimal
046-5567	House, 11063 Mill Swamp Road	1936	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5568	House, 11073 Mill Swamp Road	1950	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5569	House, 11063 Mill Swamp Road	1936	D+A: Not Eligible	Not Eligible	N/A	N/A
090-0053	Allmond House, 10532 White Marsh Road	c.1810	D+A: Demolished	Demolished	N/A	N/A
090-0055	Delk Crossroads Farm, 12251 White Marsh Road	c.1910	D+A: Demolished	Demolished	N/A	N/A
090-0058	Bell Farm Kitchen, 7098 Beechland Road	c.1900	D+A: Not Eligible	Not Eligible	N/A	N/A
090-0059	Dais/Ida House, 8229 Beechland Road	c.1800	D+A: Demolished	Demolished	N/A	N/A
090-5146	Cemetery, 14664 White Marsh Road	c.1900	D+A: Not Eligible	Not Eligible	N/A	N/A

TABLE KEY:	Warrants Mitigation	Needs Attention	**DHR does not concur**

VDHR ID#	Resource Name/Address	Year Built	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
090-5147	House, 12283 White Marsh Road	1898	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5148	House, 11649 White Marsh Road	1964	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5149	House, 435 Bellevue Road	c.1920	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5150	House, 392 Bellevue Road	1949	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5151	House, Bellevue Road	c.1950	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5152	House, 11372 White Marsh Road	c.1900	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5153	House, 11119 White Marsh Road	c.1940	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5154	House, 10837 White Marsh Road	c.1930	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5155	House, 2557 Moonlight Drive	1957	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5156	House, 968 Bellevue Road	c.1910	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5157	House, 6452 Mullet Drive	1963	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5158	House, 6420 Mullet Drive	1959	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5159	House, 9789 White Marsh Road	c.1910	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5160	House, 9091 White Marsh Road	1905	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5161	House, 9100 White Marsh Road	1949	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5162	House, 274 Berrymans Corner Road	c.1890	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5163	House, 337 Berrymans Corner Road	1942	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5164	House, 285 Berrymans Corner Road	c.1900	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5165	Simmons and Brown Cemetery, Berrymans Corner Road	c.1921	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5166	House, 1122 Berrymans Corner Road	c.1930	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5167	House, 1097 Berrymans Corner Road	c.1965	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5168	House, 1676 Berrymans Corner Road	1870	D+A: Not Eligible	Not Eligible????	N/A	N/A
090-5171	Diana Southall Carroll Cemetery, White Marsh Road	1887	D+A: Not Eligible	Not Eligible	-	**BUFFER since this is in project area**
090-5172	Mary Person Cemetery, Beechland Road	1829	D+A: Not Eligible	Not Eligible	-	**BUFFER since this is in project area**
090-5173	Shed, 7300 Beechland Road	c.1920	D+A: Not Eligible	Not Eligible	N/A	N/A
090-5174	House, Berrymans Corner Road	c.1920	D+A: Not Eligible	Not Eligible	N/A	N/A

TABLE KEY:	Warrants Mitigation	Needs Attention	**DHR does not concur**

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TABLE KEY:	Warrants Mitigation	Needs Attention	**DHR does not concur**

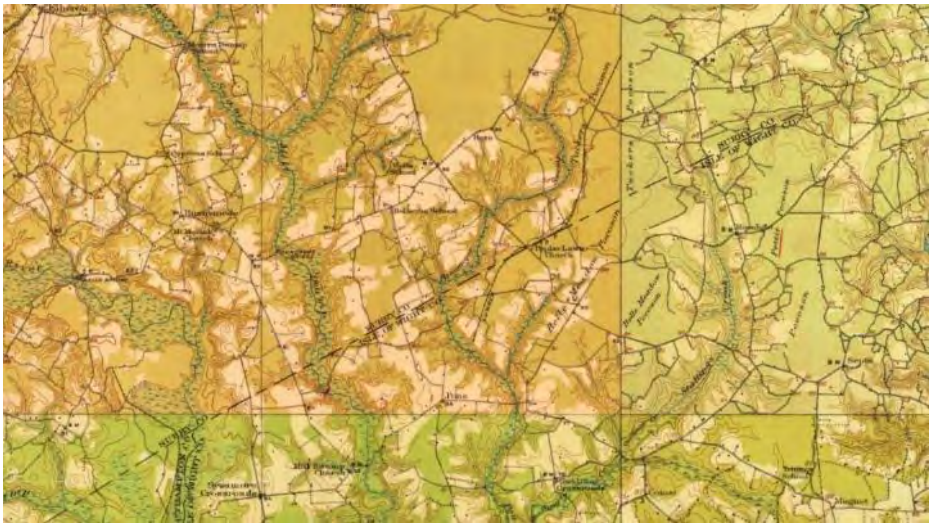
REPORT >

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

LOCATION > Isle of Wight and Surry Counties, Virginia

DATE > September 2019

PREPARED FOR >
sPower



PREPARED BY >
Dutton + Associates, LLC

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE I CULTURAL RESOURCES SURVEY OF THE ±2,106.02-HECTARE (±5,204.1-ACRE) CAVALIER SOLAR STUDY AREA

ISLE OF WIGHT AND SURRY COUNTIES, VIRGINIA

PREPARED FOR:
SPOWER
4200 INNSLAKE DRIVE
SUITE 302
GLEN ALLEN, VIRGINIA 23060

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SEPTEMBER 2020

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ABSTRACT

From February 12 through June 4, 2020, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey of the ±2,106.02-hectare (±5,204.1-acre) Cavalier Solar study area in Isle of Wight and Surry counties, Virginia. The effort included both architectural and archaeological survey to confirm the presence or absence of cultural resources, evaluate their potential eligibility for listing in the NRHP, and assess potential impacts to NRHP-eligible resources. The project area is located in Isle of Wight and Surry Counties and consists of multiple contiguous and noncontiguous parcels situated between Burwells Bay Road and White Marsh Road.

The architectural results are detailed in a separate volume of this report.

Archaeological survey was conducted according to an approved research design that consisted of a sampling strategy that targeted areas of high, medium, and low potential for archaeological sites. Pedestrian reconnaissance was conducted over every part of the study area that did not lie in wetland, and areas selected for systematic testing were either shovel tested at 15-meter (50-foot) intervals or pedestrian surveyed in transects at the same interval. A total of 1,759 shovel tests were excavated across the entire study area, and another 8.7 hectares (21.5 acres) were systematically pedestrian surveyed.

A total of 27 sites were identified during this survey. All but one of these were turn of the twentieth century domestic sites that correspond with structures depicted on the 1919 USGS topographic map. Of these early-twentieth century sites, 25 were either too disturbed by logging or other destructive activities, or too ephemeral to provide significant data. These sites are recommended ***not eligible*** *for inclusion in the NRHP, and no further consideration is recommended.*

One of the early-twentieth century sites, Site 44SY0309, sits in an agricultural field and is still relatively undisturbed. As the best surviving example of a farmstead within this vanished community, this site is recommended ***potentially eligible*** *for inclusion in the NRHP.* ***D+A recommends avoidance.*** *If avoidance is not possible,* ***Phase II evaluation to determine the extent and integrity of the deposits is recommended.***

The oldest site, 44SY0310, consisted of a small scatter of late-eighteenth through late-nineteenth century domestic materials, a possible brick feature, and a single grave dating to 1829. Although disturbance and dense vegetation prevented extensive testing in this area, the artifacts and grave suggest a long period of occupation. Due to presence of the grave and the early date of the materials, ***additional evaluation*** *is recommended to determine the site's potential for eligibility for the NRHP. Avoidance or Phase II evaluation is recommended.* ***Avoidance with a 100 foot buffer is recommended for the grave.*** *If avoidance is not possible, delineation of the area around the grave to identify the limits of the burials is recommended.*

Finally, two copses of trees were identified that correspond with the locations of cemeteries recorded on topographic maps or through oral history. Because no grave features were noted in these areas, ***D+A recommends the potential cemeteries either be avoided with a 100 foot buffer or delineated to determine the extent and nature of these features.***

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1. INTRODUCTION

From February 12 through June 4, 2020, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey of the ±2,106.02-hectare (±5,204.1-acre) Cavalier Solar study area in Isle of Wight and Surry counties, Virginia. The Phase I was conducted for planning purposes in order to confirm the presence or absence of cultural resources located in the study area and evaluate them for National Register of Historic Places (NRHP) eligibility. For any resources recommended to be potentially eligible for listing in the NRHP, an assessment of impacts resulting from construction or operation of the project was also conducted. Background research and field reconnaissance were used to develop an appropriate survey strategy, which was then implemented.

The study area consists of contiguous and discontiguous parcels spanning the border of Isle of Wight and Surry counties. Major roads that run adjacent and through the study area include White Marsh Road (Route 617), Stallings Creek Drive, Burwells Bay Road (Route 621), Mill Swamp Road (Route 626), Jones Drive and Beechland Road (Route 626) (Figures 1-1 and 1-2). Because of the immense size of the study area, it has been divided into five specific areas using major roads and parcel boundaries that may be referenced throughout the text (Figure 1-3).

The study area defined here may not correspond precisely with the boundaries chosen for the final development project. Rather, the study area represents the maximum extent of the parcels being considered for development, and the final project area may be smaller than the current study area.

Hope Smith, Ph.D., served as Principal Investigator, prepared the research design, and coauthored the report. Dara Friedberg, M.S., conducted background research for the project and coauthored the report. Henry Foote, Delaney Hunter, Courtney Roark, Shannon Sullivan, Natalie Williams, and Atticus Woodruff served as field crew. Copies of all field notes, maps, correspondence, and research materials are on file at D+A's main office in Midlothian, Virginia.

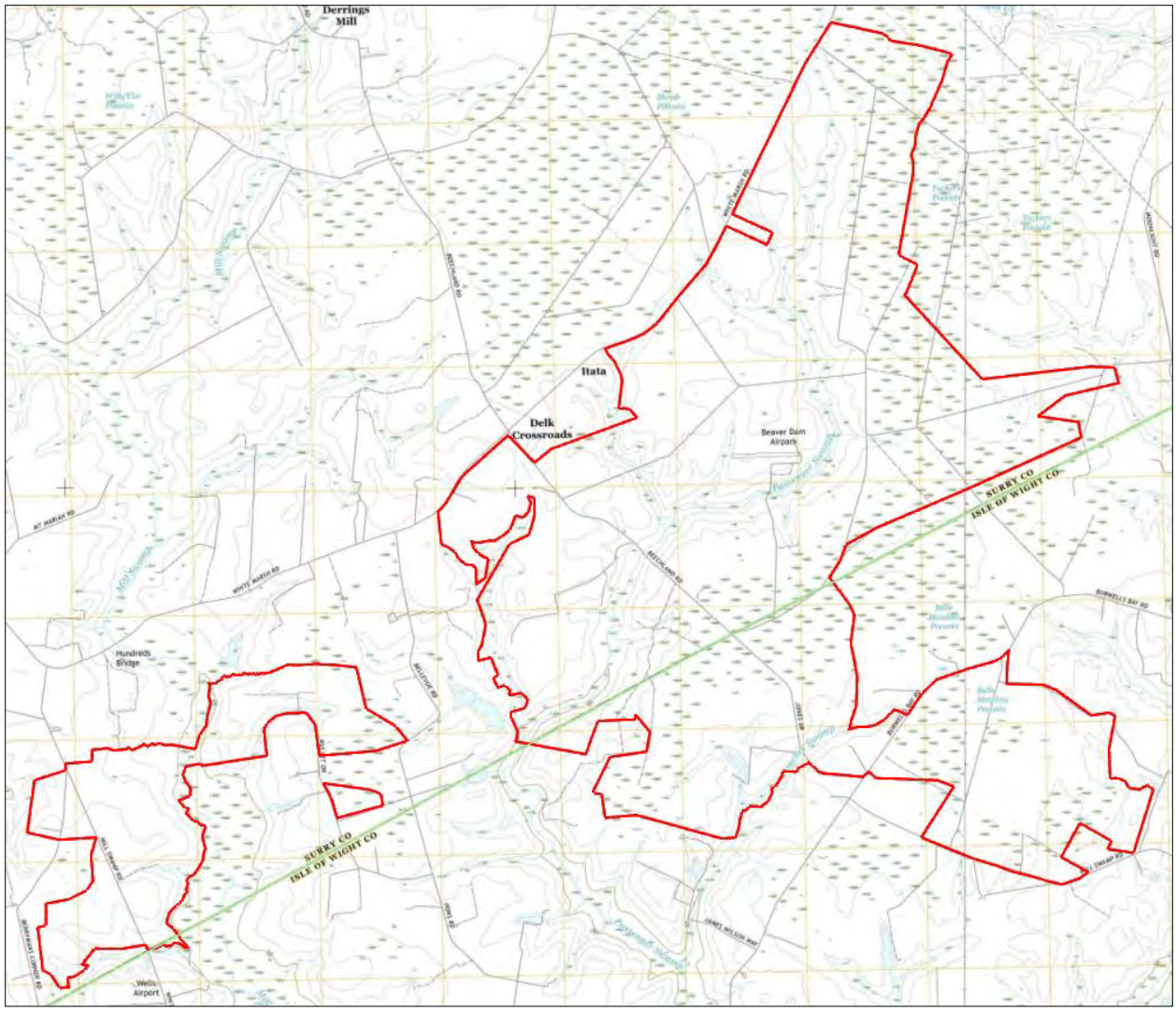

Figure 1-1: Topographic maps depicting the location of the study area. Source: USGS

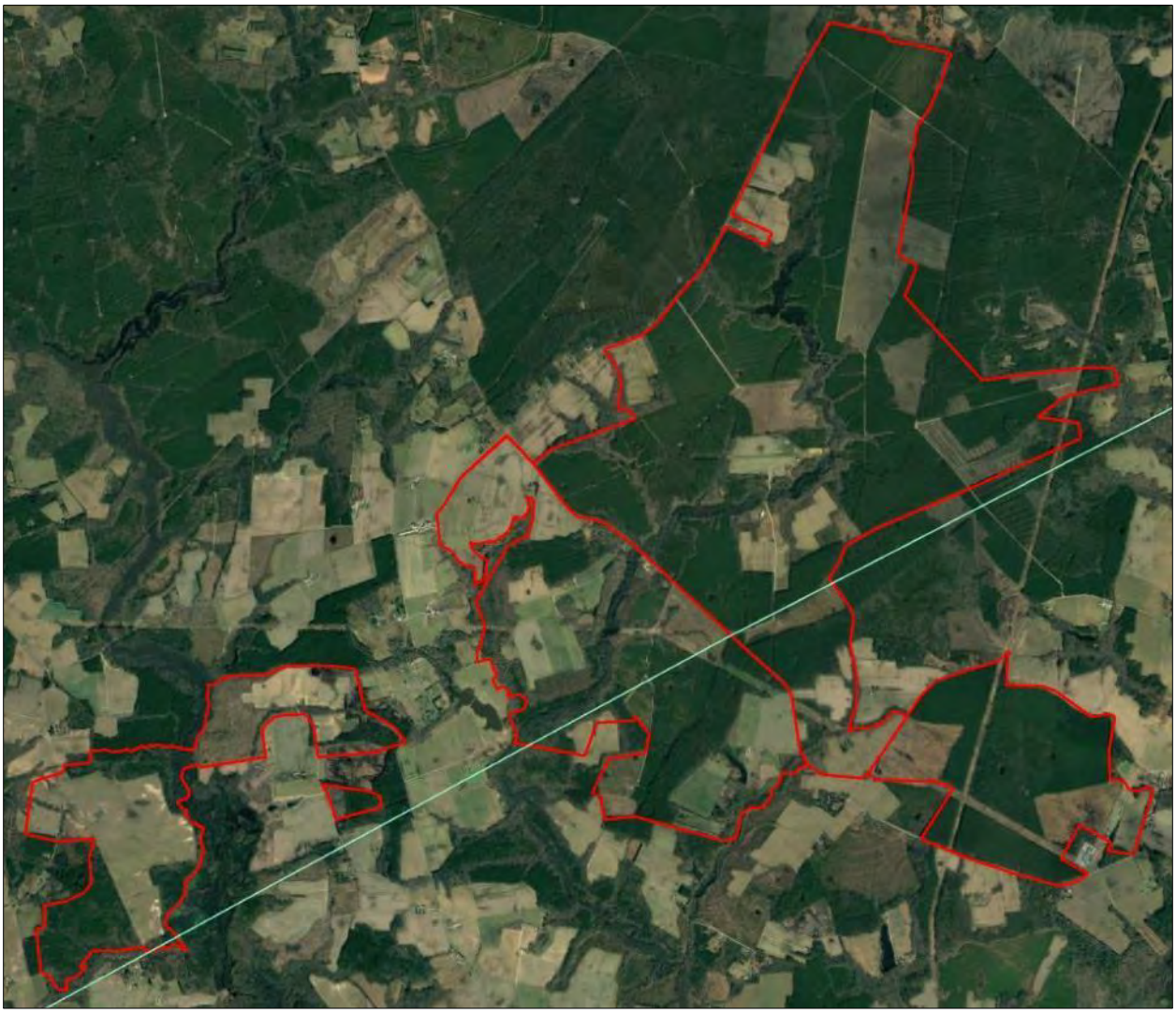

Figure 1-2: Aerial view of study area shown in red. Source: Google Earth 2018

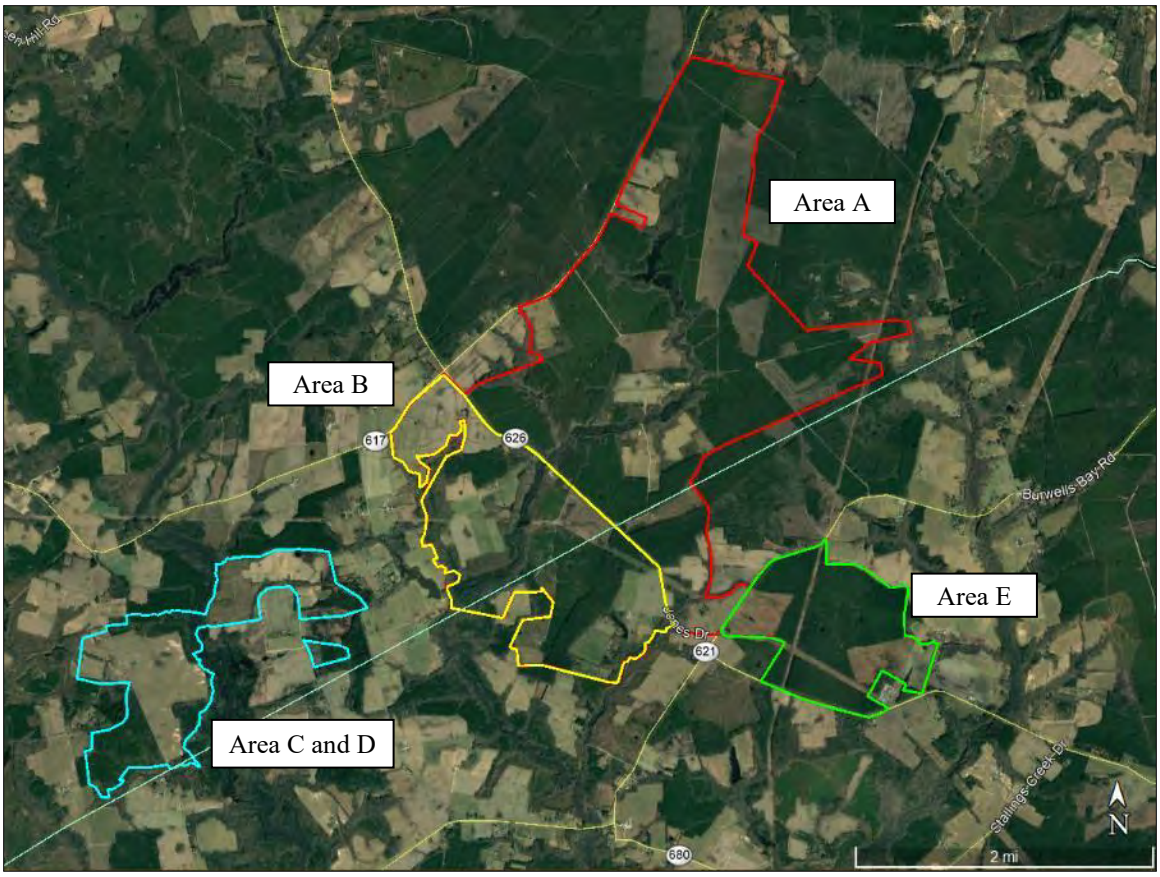

Figure 1-3: Cavalier Solar study area, showing sub-areas. Source: Google Earth 2018

2. RESEARCH DESIGN

The Phase I cultural resource survey of the Cavalier Solar project area was undertaken in order to confirm the existing condition of the property, note any surface evidence of cultural activity, recommend and implement an appropriate survey methodology for the property based upon the results of the background research and field reconnaissance, and identify the presence or absence of cultural resources on the property. The background research, field reconnaissance, and field survey methodologies are summarized below.

ARCHIVAL RESEARCH

In September 2020, D+A conducted background research with the goal of identifying all previously recorded historic properties located within and in the vicinity of the project area in accordance with VDHR's guidance document titled *Guidelines for Conducting Cultural Resources Survey in Virginia* (Revised 2017). Background research was conducted at the VDHR and on the internet and including the following sources:

- VDHR V-CRIS site files; and
- National Park Service, American Battlefield Protection Program, maps and related documentation.

As part of this Phase I study, D+A checked resource data at each of the above sources to verify accuracy and ensure the information was up to date at the time of the survey. In further preparation for the Phase I survey, D+A conducted additional review of the following documents and sources for information relative to unrecorded historic property locations in the project area:

- County Tax Assessors records;
- USDA Historic Aerial Imagery;
- U.S. Geological Survey Topographic Maps;
- Previous historic resource survey documents; and
- Local historical society archives.

The additional review conducted in support of the Phase I survey was designed to identify all properties greater than 50 years of age located within the project area. Historic properties include architectural resources, historic and cultural landscapes, battlefields, and historic districts.

CONTEXT DEVELOPMENT

Information from the literature review and background search was used in conjunction with additional research to develop a cultural and historical context to place the project area and any identified historic resources within their appropriate context for evaluations of historical significance. This context was developed through review of previous cultural resource studies, published and unpublished manuscripts, historic maps, aerial photographs, local histories, and a variety of internet sources.

For the purposes of this effort, a comprehensive cultural context of Isle of Wight and Surry Counties was prepared summarizing general historical trends, settlement patterns, and development with a focus on the vicinity of the project area. Further analysis and context development were undertaken for the defined survey area so that newly recorded resources could be effectively evaluated.

FIELD SURVEY

Architectural Resources

The background research conducted in support of the Phase I reconnaissance survey was designed to identify all properties greater than 50 years of age located within the project area. Visual inspection included digital photo documentation of each property's existing conditions and setting. Photographs of primary elevations and general setting were taken from public ROW and where possible, on private property. Resources over 50 years of age were identified and confirmed by the Isle of Wight County and Surry County tax records, historic aerial photography, and field inspection. Virginia Cultural Resource Information System (V-CRIS) site forms were completed for all cultural resources, 50 years of age or older identified during the survey and were submitted to VDHR.

Archaeological Resources

At the outset of field investigations, a pedestrian reconnaissance of the project area was conducted to document existing conditions and to note surface evidence of cultural activity or material and identify areas with the potential for intact subsurface archaeological resources. For any newly encountered archaeological resources identified during the reconnaissance, photographs were taken of the general vicinity and of any visible features. A field map was prepared showing feature locations, permanent landmarks, topographic and vegetation variation, as well as sources of disturbance. Sufficient information was included on the map to permit easy re-identification of the resources.

Following the pedestrian survey, systematic shovel testing was conducted throughout the high probability sections, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water saturated soils at the time of the survey. Shovel tests were excavated at a maximum of 15-meter (50-foot) intervals along transects spaced 15 meters (50 feet) apart. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

For any archaeological resources identified during the survey, photographs were taken of the general vicinity and of any visible features. A field map was prepared showing site limits, feature locations, permanent landmarks, topographic and vegetational variation, sources of disturbance, and all surface and subsurface investigations. GPS coordinates for all identified site locations were recorded and sufficient information was included on maps to permit easy relocation of sites. Notes

were taken on surface and vegetational conditions, soil characteristics, dimensions and construction of features evident, and the amount and distribution of cultural materials present. All subsurface archaeological excavations were backfilled and returned to pre-survey conditions.

LABORATORY ANALYSIS

All artifacts generated in the course of the survey were provenienced in the field and recorded. Following fieldwork, the artifacts were transported to the D+A laboratory facilities where they were cleaned, sorted, and identified. After processing, all artifacts were inventoried using Microsoft Excel. A computer-printed artifact inventory of prehistoric and historic artifacts is included as an appendix to this report.

Identification of diagnostic artifacts was made by consulting existing comparative collections and available regional literature regarding artifact types. Artifacts were assigned dates through the comparison of identified artifacts with other material culture classes having documented use-popularity patterns. Ceramics and glass provided primary chronological information. All artifacts were placed in polyethylene re-sealable storage bags and placed in acid free boxes suitable for permanent curation. At the conclusion of the survey, arrangements will be made with the client regarding final deposition of the artifacts.

REPORT AND RECORD PREPARATION

Information from field survey was used in conjunction with background research and context development to assess each identified cultural resource for potential NRHP-eligibility. A results section was prepared that summarizes the field findings, assessment of significance and NRHP-eligibility. The results of the study are accompanied by maps and photographs as appropriate and were synthesized and summarized in this report along with the research design, archives search, and cultural contexts. All research material and documentation generated by this project are on file at D+A's office in Midlothian, Virginia. VDHR site forms (Virginia Cultural Resources Information System (V-CRIS) were completed for all cultural resources, 50 years of age or older, identified during the survey. Site forms for archaeological sites are include as an appendix to this report.

QUALIFICATIONS AND STANDARDS

The D+A personnel who directed and conducted this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9). All work was conducted in accordance with the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (Federal Register 48:44716-44742, September 29, 1983), and VDHR's *Guidelines for Conducting Historic Resource Survey in Virginia* (rev. 2017).

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3. ENVIRONMENTAL CONTEXT

PHYSICAL DESCRIPTION AND LOCATION

The Cavalier Solar study area consists of ±2,106.02 hectares (±5,204.1 acres) of land divided into multiple contiguous and discontiguous parcels (Figure 3-1). The study area is located north and south of the Isle of Wight-Surry County line. Beechland Road, White Marsh Road, and Mill Swamp Road are some of the main roads that run through or abut the parcels that make up the study area. Land usage consists of a combination of managed timber forest, clear-cut areas, and agricultural fields.

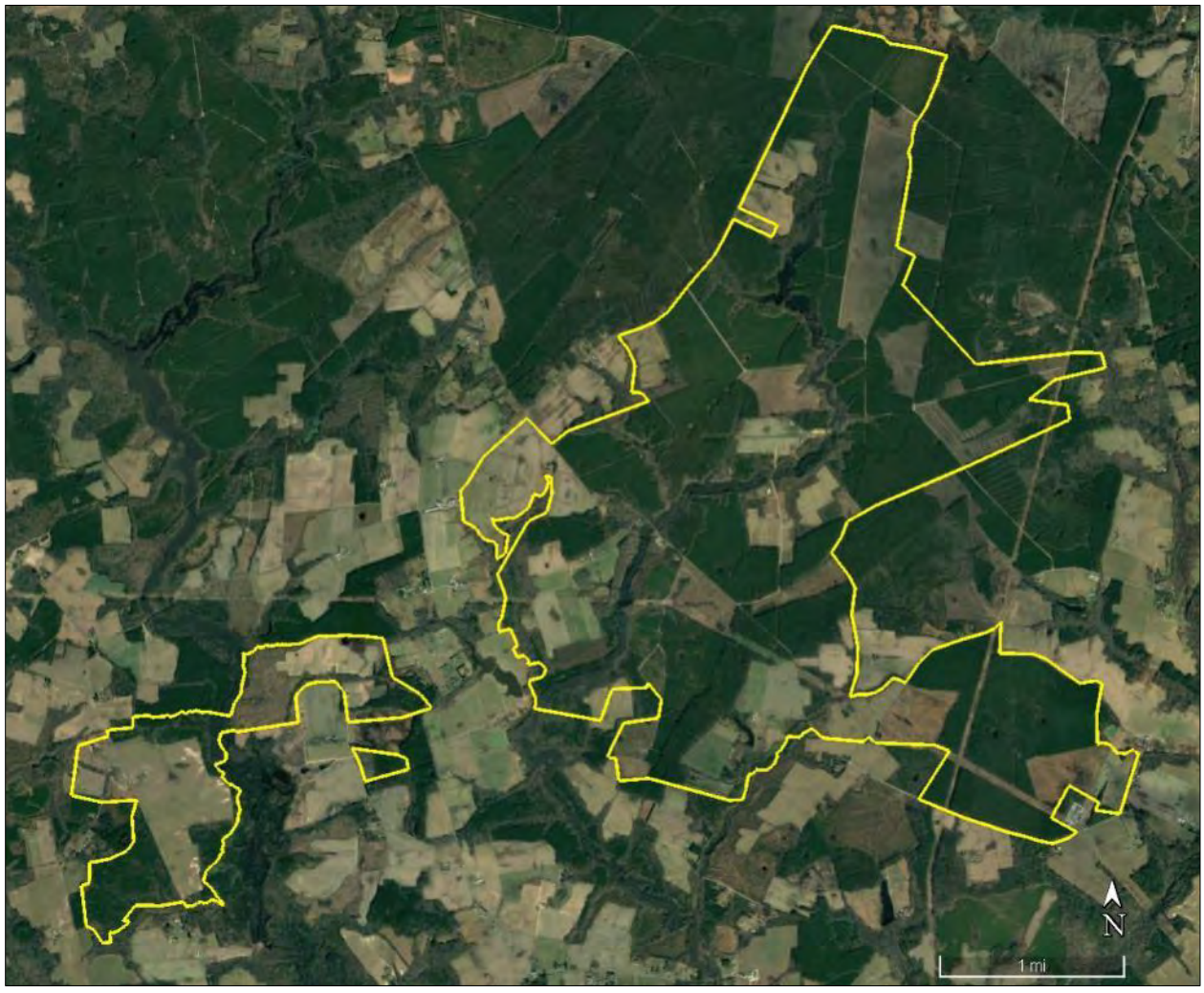

Figure 3-1. Aerial view of study area (shown in yellow) illustrating existing conditions.

GEOLOGY AND TOPOGRAPHY

The study area topography is characterized by primarily flat level terrain associated with the Lowland subprovince of the Coastal Plain region. The area is underlain by a thick wedge of sediments resting on an eroded surface of Precambrian to early Mesozoic rock. Generally, a lightly

dissected, dendritic drainage pattern occurs throughout this region with broad, low landforms and shallow, sluggish drainageways. The elevation of the western parcel of the study area ranges from approximately ±13.7 meters (45 feet) to ±25.6 meters (84 feet) above mean sea level with the highest elevations located in the southern portion and the lowest located in the central portion. The elevation of the eastern parcel of the study area ranges from approximately ±11.89 meters (39 feet) to ±24.38 meters (80 feet) above mean sea level with the highest elevations located in the northern portion and the lowest located in the southern portion.

HYDROLOGY

The western parcels of the Cavalier Solar study area drain into an unnamed tributary of Chuckatuck Creek, which empties into Hampton Roads and the Chesapeake Bay before ultimately draining into the Atlantic Ocean. The eastern parcels of the study area drain into unnamed tributaries of Cypress Creek, which flows into the Pagan River. This flows into the James River and then into the Chesapeake Bay before ultimately draining into the Atlantic Ocean.

PEDOLOGY

The study area is dominated by sandy loams and sandy clay loams formed from marine sediments. The most prominent soil type is Rains fine sandy loam, which represents about 22% of the study area and is considered somewhat poorly drained (Figure 3-2 and Table 3-1). The second most prominent soil type is Myatt fine sandy loam, which is also poorly drained and covers about 14% of the study area. Approximately 2,261.5 acres of the study area are classified as poorly drained or very poorly drained, and another 1,866 acres are classified as somewhat poorly drained. The remaining soils are classified as moderately well drained to excessively drained.

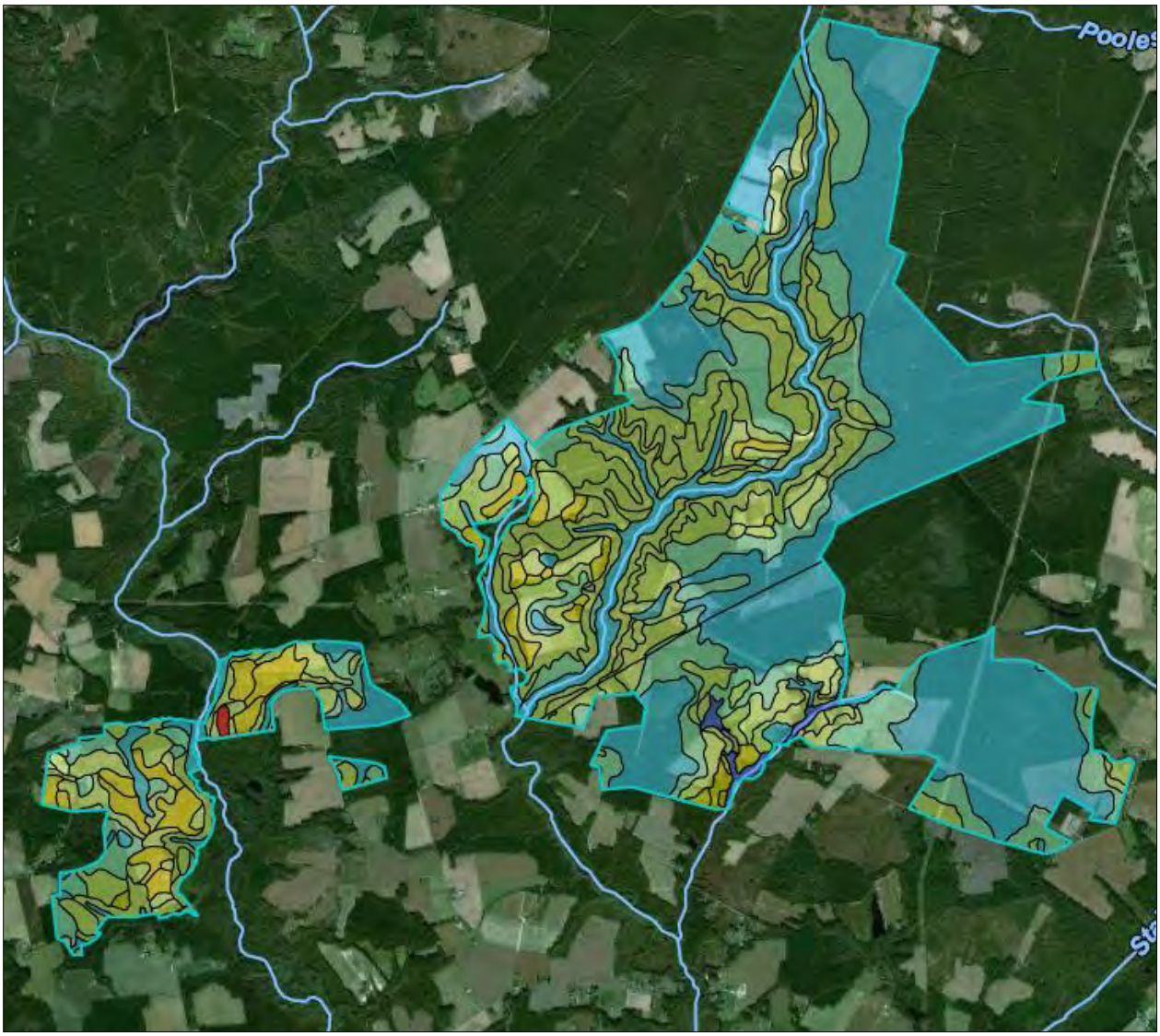

Figure 3-2. Soil survey of the Cavalier Solar study area showing drainage class (USDA 2019).

Table 3-1: Soil survey data for portion of study area, divided by county, showing drainage rating. Source: USDA 2019.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	4.9	0.1%
7	Kinston loam	Poorly drained	21.1	0.4%
9	Myatt fine sandy loam	Poorly drained	736.2	14.1%
10	Nawney loam	Very poorly drained	34.1	0.7%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	Moderately well drained	10.4	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	147.1	2.8%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	59.5	1.1%
18C	Slagle fine sandy loam, 6 to 10 percent slopes	Moderately well drained	2.7	0.1%
19B	Uchee loamy sand, 2 to 6 percent slopes	Well drained	0.5	0.0%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	Well drained	19.7	0.4%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	Well drained	3.6	0.1%
23	Yemassee fine sandy loam	Somewhat poorly drained	291.6	5.6%
W	Water		2.7	0.1%
Subtotals for Soil Survey Area			**1,334.2**	**25.6%**
Totals for Area of Interest			**5,204.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2A	Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	113.8	2.2%
5B	Burrowsville loamy sand, 2 to 6 percent slopes	Moderately well drained	2.9	0.1%
6B	Caroline silt loam, 2 to 6 percent slopes	Well drained	12.5	0.2%
8B	Chipley fine sand, 0 to 4 percent slopes	Moderately well drained	5.2	0.1%
9A	Chipley-Leon complex, 0 to 2 percent slopes	Moderately well drained	7.7	0.1%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
9B	Chipley-Leon complex, 2 to 5 percent slopes	Moderately well drained	6.8	0.1%
10A	Craven fine sandy loam, 0 to 2 percent slopes	Moderately well drained	22.2	0.4%
10B	Craven fine sandy loam, 2 to 6 percent slopes	Moderately well drained	39.2	0.8%
10C	Craven fine sandy loam, 6 to 10 percent slopes	Moderately well drained	18.3	0.4%
11B3	Craven clay loam, 2 to 6 percent slopes, severely eroded	Moderately well drained	5.3	0.1%
12B	Craven-Slagle complex, 2 to 6 percent slopes	Moderately well drained	80.1	1.5%
14A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	27.9	0.5%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	114.2	2.2%
17A	Jedburg loam, 0 to 2 percent slopes	Somewhat poorly drained	632.1	12.1%
19B	Kenansville sand, 2 to 6 percent slopes	Well drained	14.9	0.3%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	5.7	0.1%
21B	Lakeland sand, 2 to 6 percent slopes	Excessively drained	6.1	0.1%
25A	Nahunta silt loam, 0 to 2 percent slopes	Somewhat poorly drained	9.4	0.2%
26B	Nansemond sandy loam, 0 to 4 percent slopes	Moderately well drained	66.7	1.3%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	Poorly drained	224.7	4.3%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	Moderately well drained	26.0	0.5%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	Moderately well drained	503.7	9.7%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	Moderately well drained	67.1	1.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	Poorly drained	1,147.7	22.1%
32B	Rumford loamy sand, 2 to 6 percent slopes	Well drained	11.9	0.2%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	118.7	2.3%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
33B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	512.3	9.8%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	Well drained	65.8	1.3%
W	Water		0.9	0.0%
Subtotals for Soil Survey Area			**3,869.8**	**74.4%**
Totals for Area of Interest			**5,204.1**	**100.0%**

4. PREVIOUS INVESTIGATIONS

This section includes a summary of all the cultural resource management events that have taken place within the study area registered at VDHR through July 2019. It also lists all previously identified architectural resources and archaeological sites located within the study area, as well as within one mile of the study area.

AREAS A, B, AND E

PREVIOUS SURVEYS RELEVANT TO THE SITE

Research at the VDHR reveals that one Phase I archaeological survey has been conducted within one mile of the study area, which slightly overlaps with the study area (Figure 4-1): *An Archaeological Reconnaissance Survey of the 500KV, Septa to Yadkin Line in the County of Isle of Wight and the Cities of Suffolk and Chesapeake, Virginia* in 1981 by Howard A. MacCord, Sr. (Archaeological Society of Virginia)

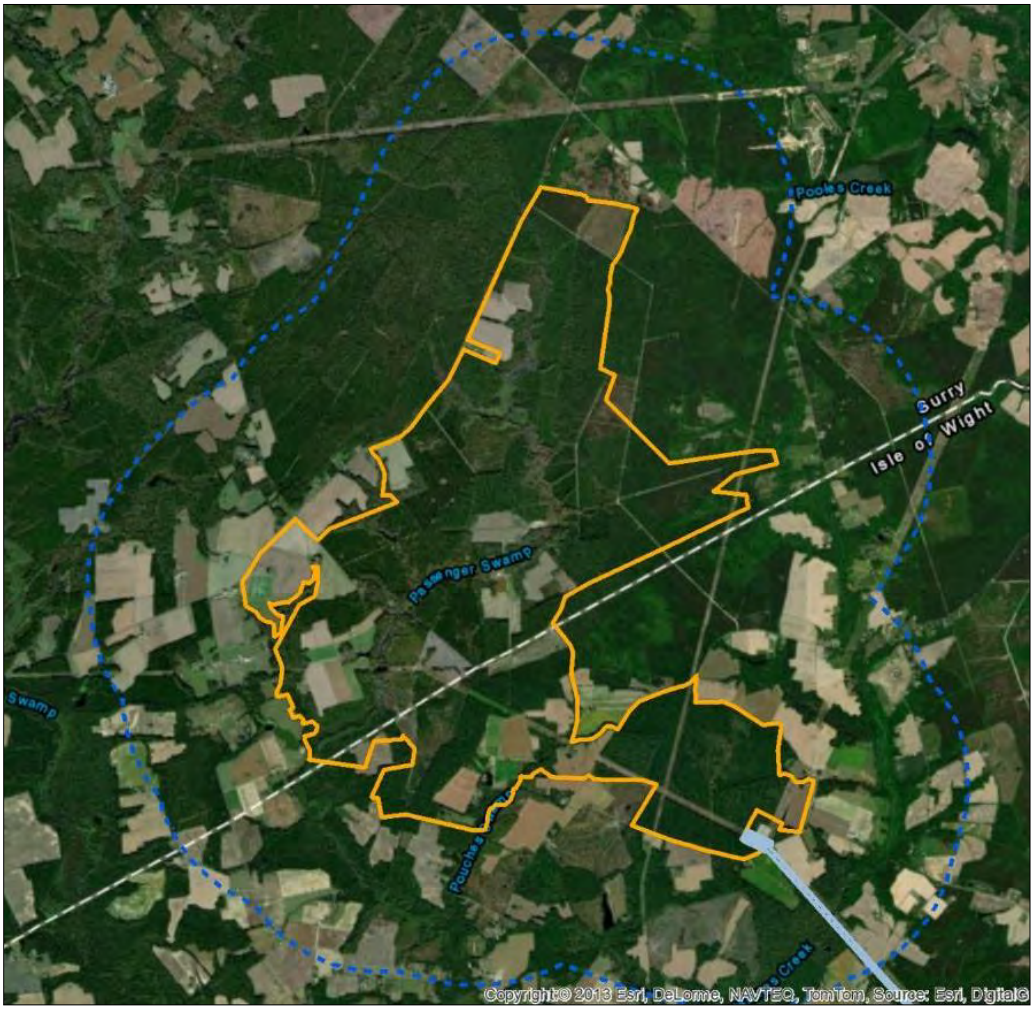

Figure 4-1: Previous surveys (gray hatched) conducted within 1.0 mile (dotted blue) of Areas A, B, and E of the study area (yellow). Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are no previously recorded archaeological sites located within one mile of the study area and none are located within the study area (Figure 4-2).

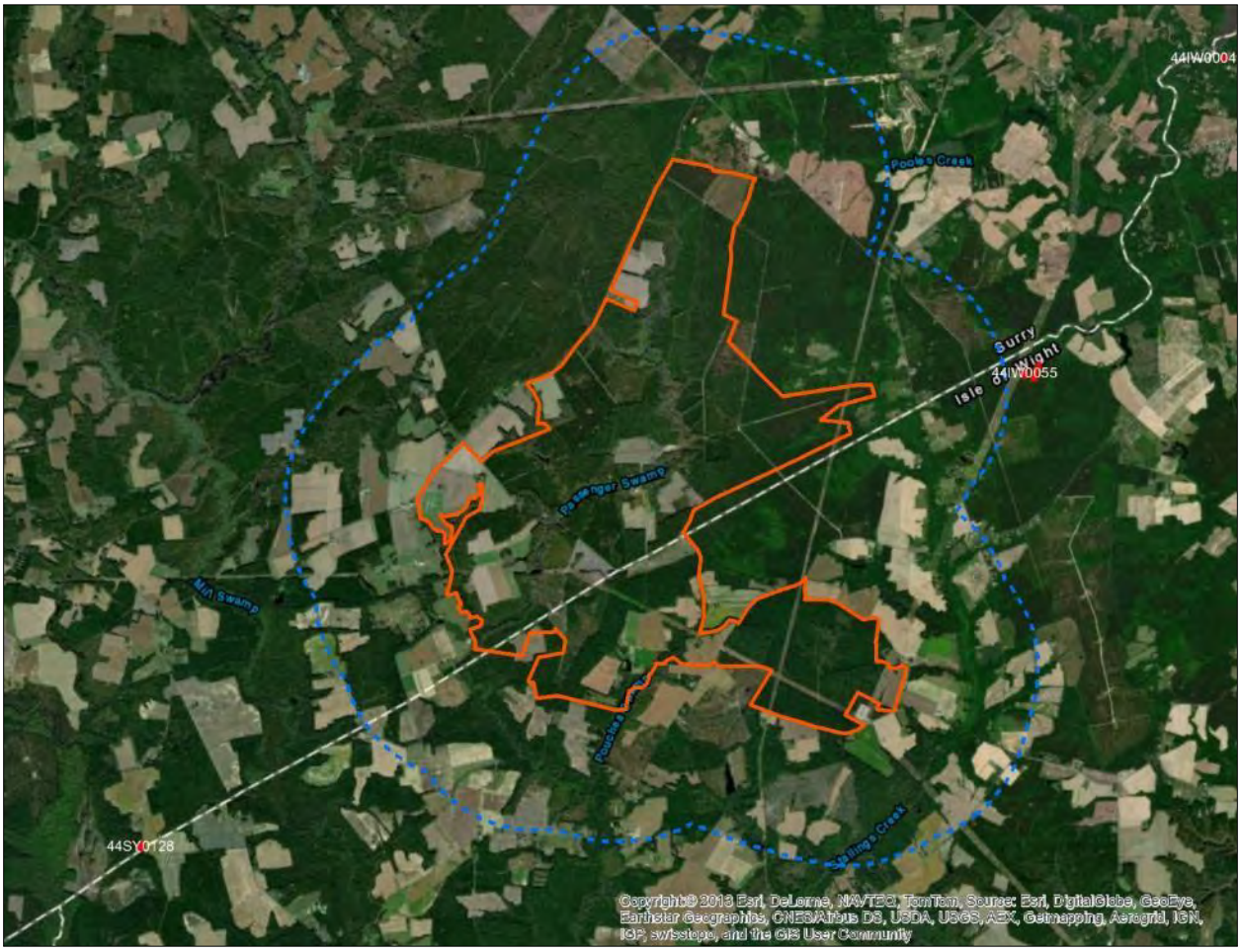

Figure 4-2: Map detailing all archaeological resources (red) within 1.0 mile (dotted blue) of Areas A, B, and E of the study area (orange). Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

Review of VDHR records identifies 12 previously recorded standing resources located within one mile of the study area, three of which are located within the study area (Figure 4-6, Table 4-3). These include a ca.1790 single dwelling (#090-0059) and a ca. 1800 single dwelling (#046-0066), a ca. 1830 farm kitchen (090-0058) none of which have been evaluated for eligibility for listing in the NRHP.

Among the remaining previously recorded resources are other single dwellings, a commercial building, bridge, and a kitchen. There is one resource that is listed in the NRHP: the Carroll Plantation/Fanlight House/Gray Carroll House (#046-0064). The remaining resources have either been determined not eligible or have not been formally evaluated for inclusion in the NRHP.

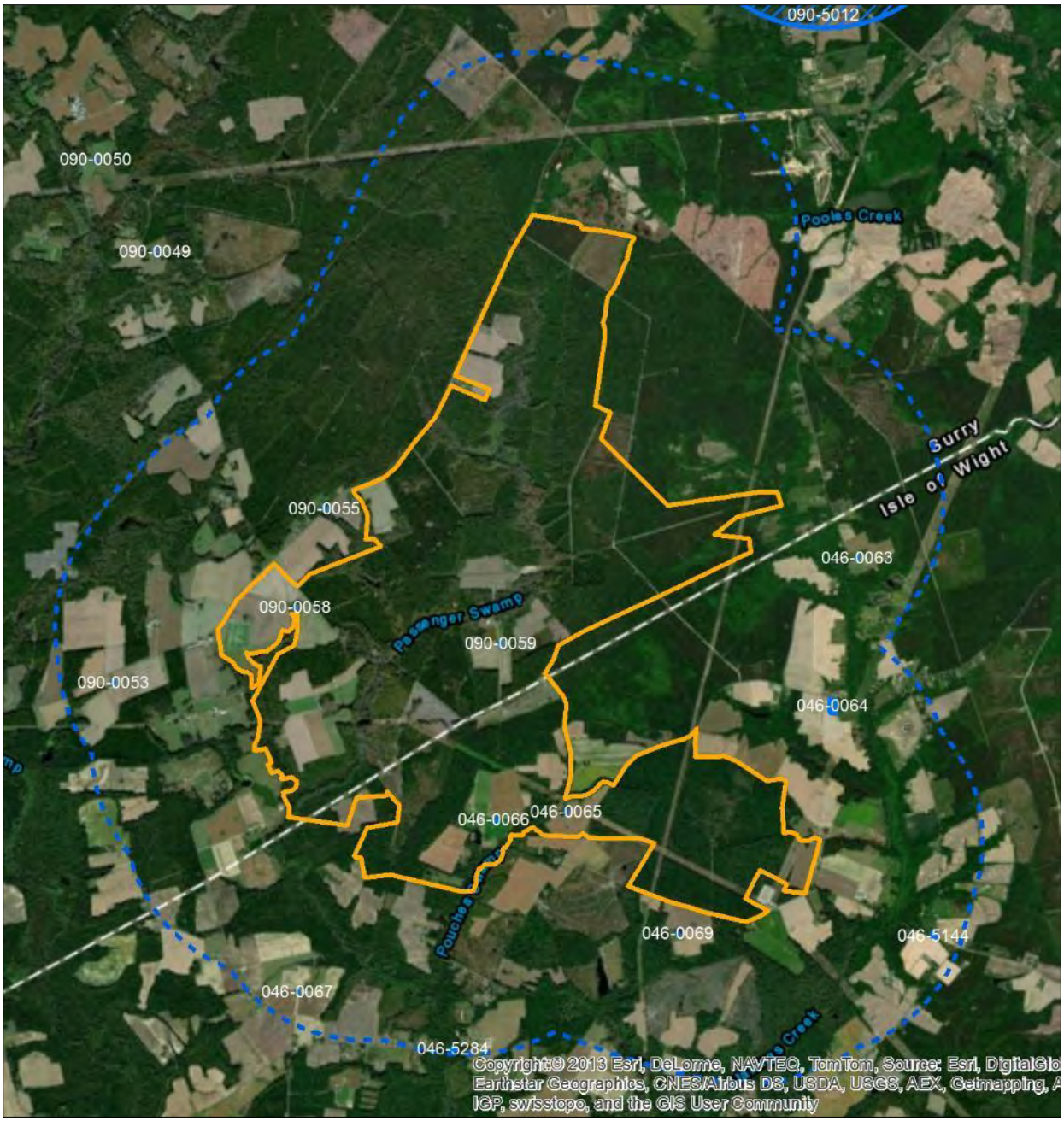

Figure 4-3: Map detailing all architectural resources (blue) within 1.0 mile (dotted blue) of Areas A, B, and E of the study area (orange). Source: V-CRIS

Table 4-1: Previously identified architectural resources located within 1.0 mile of the study area. Those resources highlighted orange have been determined eligible for the NRHP.

VDHR ID#	Resource Name	Type	Year	NRHP Status
046-063	House, Route 627	Single dwelling	Ca. 1800	Not Evaluated
046-0064	Carroll Plantation, Fanlight House, Carroll House	Single dwelling	Ca. 1820	DHR Staff: Eligible
046-0065	Jones House	Single dwelling	Ca. 1800	Not Evaluated
046-0066	Gale Farm	Single dwelling	Ca. 1800	Not Evaluated
046-0067	Pons House, Rt 625	Single dwelling	Ca. 1800	Not Evaluated
046-0069	Delk Farm	Single dwelling	Ca. 1810	Not Evaluated
046-5144	Store, 11489 Mill Swamp Road; Store, Intersection of Mill Swamp Road and Moonlight Road	Commercial building	1930	Not Evaluated
046-5284	Bridge #6031, Mill Swamp Road; Isle of Wight County Bridge #6031	Bridge	1945	DHR Staff: Not Eligible
090-0053	Allmond House	Single dwelling	Ca. 1810	Not Evaluated
090-0055	Delk Crossroads Farm	Single dwelling	Post 1910	Not Evaluated
090-0058	Bell Farm	Kitchen	Ca. 1830	Not Evaluated
090-0059	Dais/Ida House	Single dwelling	Ca. 1790	Not Evaluated

AREA C AND D

PREVIOUS SURVEYS RELEVANT TO THE SITE

Research at the VDHR reveals that there are no Phase I archaeological surveys that have been conducted within one mile of the study area and none have taken place within the study area (Figure 4-4).

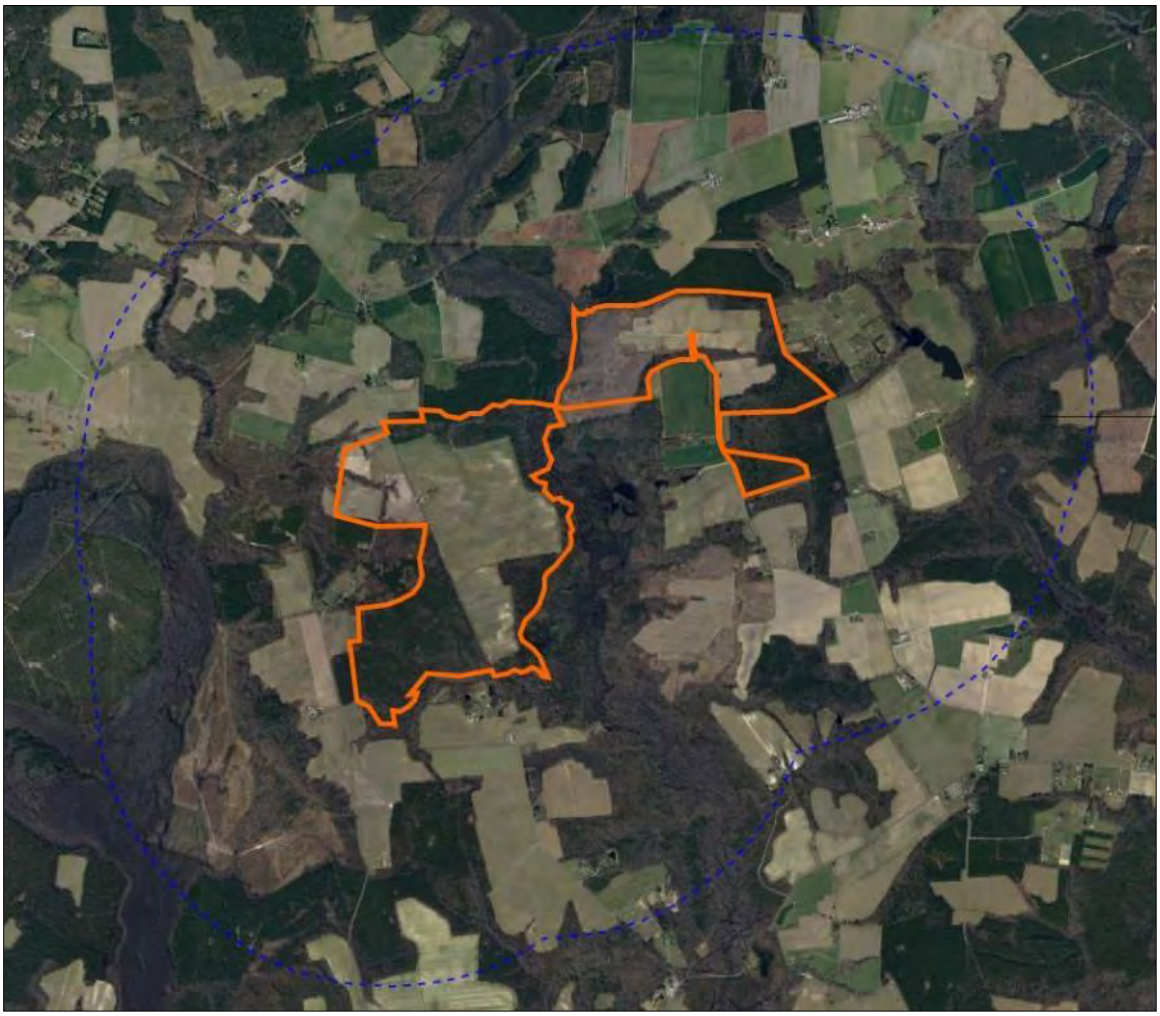

Figure 4-4: Previous surveys (green hatched) conducted within 1.0 mile (dotted blue) of C and D of the study area (orange). Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There is one previously recorded archaeological site located within one mile of the study area and none are located within the study area (Figure 4-2, Table 4-5). This site is a single dwelling with an indeterminate historic date range, and it has not been formally evaluated.

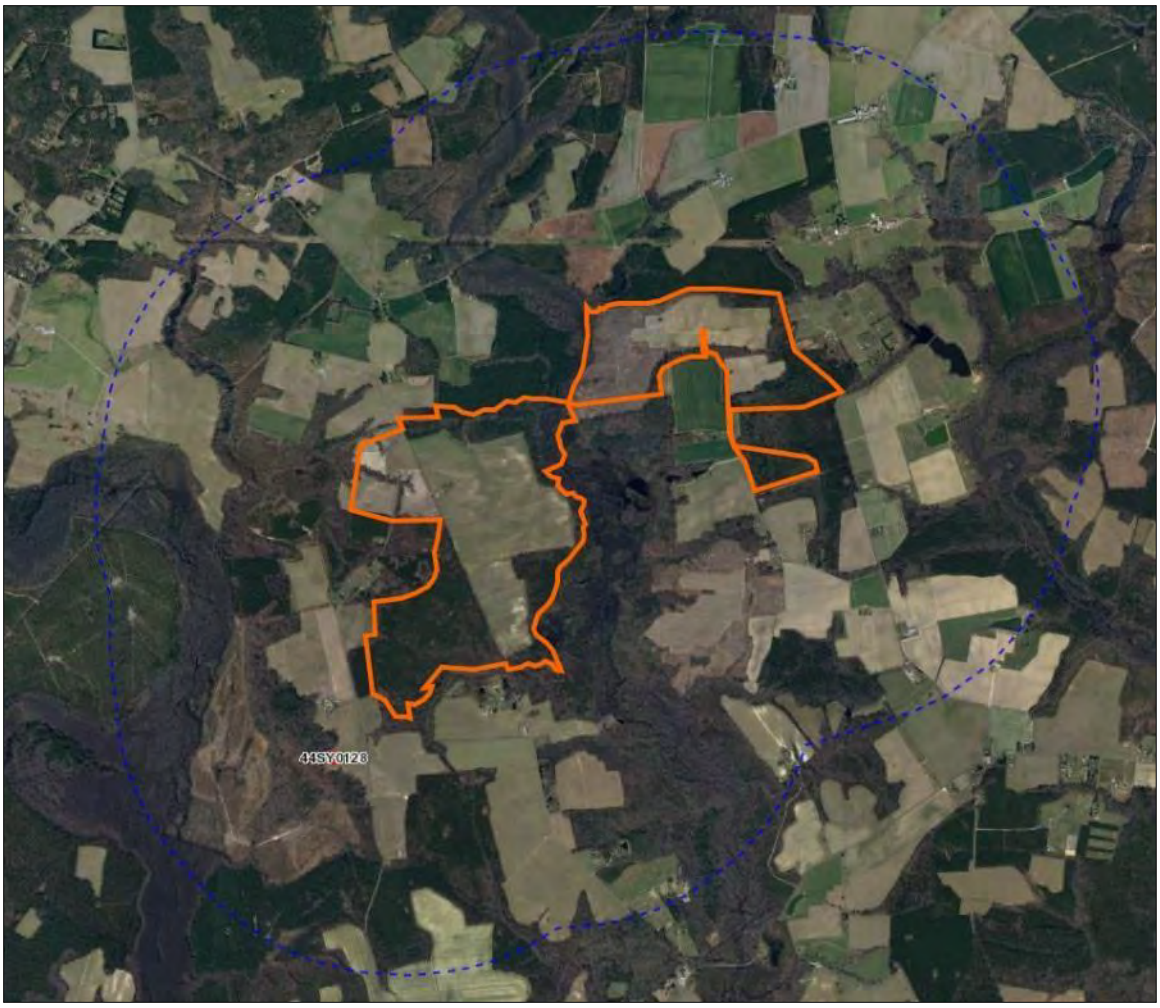

Figure 4-5: Map detailing all archaeological resources (red) within 1.0 mile (dotted blue) of Area C and D of the study area (orange). Source: V-CRIS

Table 4-2: Previously identified archaeological sites located within 1.0 mile of the study area.

VDHR ID#	Site Types	Cultural Designation	Temporal Association	NRHP Status
44SY0128	Single dwelling	Indeterminate	Historic/Unknown	Not Evaluated

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

Review of VDHR records identifies two previously recorded standing resources located within one mile of the study area, none of which are located within the study area (Figure 4-3, Table 4-6). The previously recorded resources are single dwellings that have not been formally evaluated for inclusion in the NRHP.

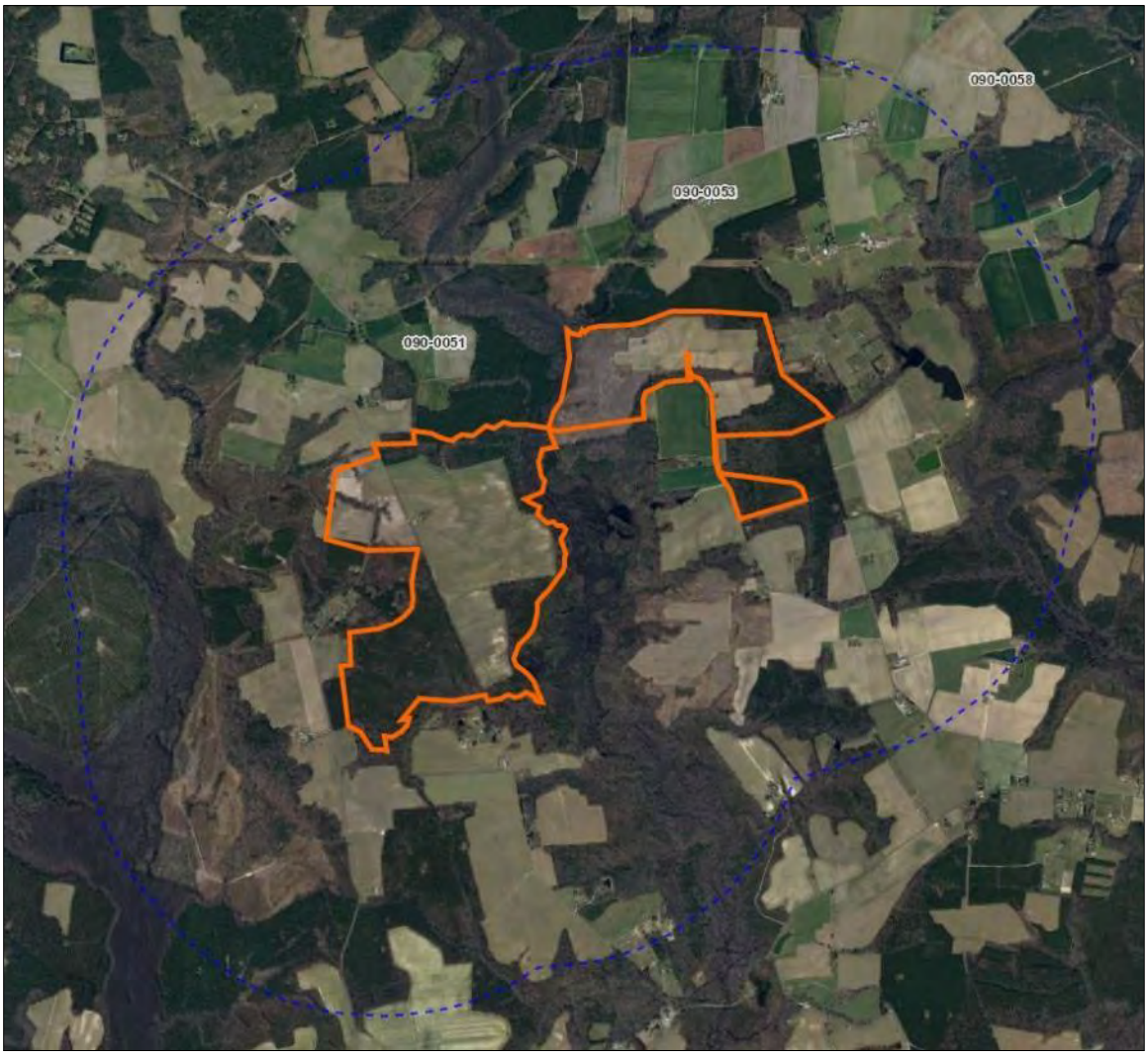

Figure 4-6: Map detailing all architectural resources (blue hatched) within 1.0 mile (dotted blue) of Area C and D of the study area (orange). Source: V-CRIS

Table 4-3: Previously identified architectural resources located within 1.0 mile of the study area.

VDHR ID#	Resource Name	Type	Year	NRHP Status
090-0051	Stratman House	Single dwelling	Ca. 1750	Not Evaluated
090-0053	Allmond House	Single dwelling	Ca. 1810	Not Evaluated

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5. CULTURAL CONTEXT

The following section provides a brief summary of the general overarching regional prehistoric and historic themes relevant to Virginia and Isle of Wight and Surry counties. Because of the immense size of the study area, it has been divided into five specific areas that may be referenced throughout the following context (Figure 5-1).

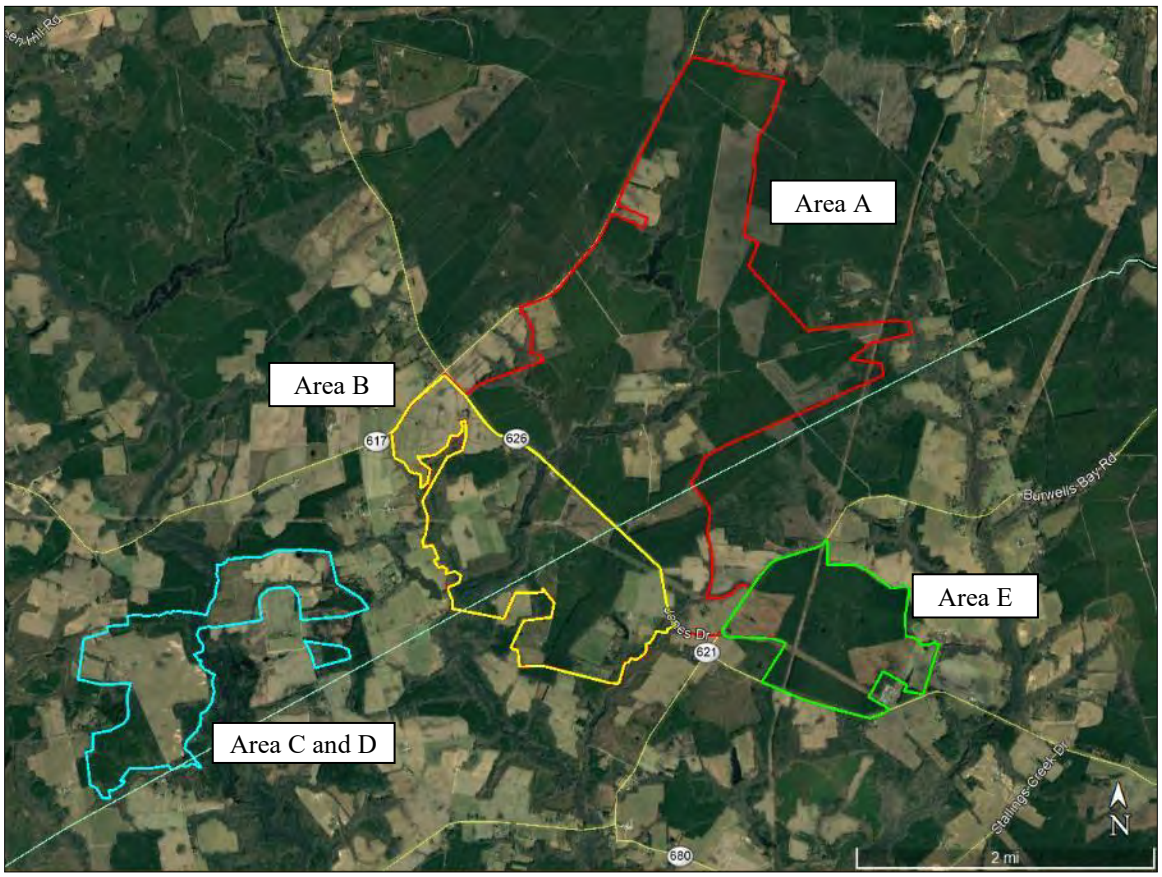

Figure 5-1: Cavalier Solar study area. Source: Google Earth

The primary emphasis of this context focuses on the anthropological and material culture trends in prehistory and history and describes how people throughout time could have left their archaeological mark on the landscape of the study area specifically. Prehistoric and historic occupation statistics and trends were analyzed, as were historic maps and available first-hand accounts which aided in establishing the appropriate cultural context for the study area as defined by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and the Virginia Department of Historic Resources' *How to use Historic Contexts in Virginia: A Guide for Survey, Registration, Protection, and Treatment Projects* (VDHR 2017).

PALEOINDIAN PERIOD (PRIOR TO 8000 B.C.

Recent archaeological findings in Virginia have found the first Paleoindians are projected to have arrived in the southeast of North America between 15,000 and 11,000 years ago (McAvoy and

McAvoy 1997). Two of the earliest archaeological sites associated with Paleoindian occupation in Virginia is the Cactus Hill site (VDHR #44SX0202) located along the Nottoway River in Sussex County and the Thunderbird Site (VDHR #44WR0011) in Warren County. These early populations coincided with the late glacial era when sea levels were approximately 230 feet below their present-day level (Anderson et al. 1996:3). The Laurentide Ice Sheet covered much of northern North America, lowering temperatures in the region and creating an ideal environment for a boreal forest (Delcourt and Delcourt 1981). Paleoindians apparently survived in this environment through opportunistic hunting and gathering of smaller mammals, fish, and wild plants (Fiedel 2001). Seasonably mobile, these Paleoindians utilized different food sources at different times of the year, an extensive subsistence pattern that required a large territory.

Accordingly, the Paleoindians may have maintained a central base camp located either in a diverse ecozone where flora and fauna were easily procured or near lithic sources that contained cryptocrystalline stone. Wider ranging satellite camps would have then have been seasonally occupied to exploit other natural resources, be they lithic material, flora, or fauna (Anderson et al 1996; Daniel 1996; Binford 1980). Most Paleoindian sites are small and scattered, suggesting that the groups lived in small familial bands distributed across the landscape. The lack of status items among their archaeological remains suggests that these groups recognized little differentiation in status, and probably employed an egalitarian social structure. Ethnographic analogies suggest that Paleoindians might have maintained this rough equality by shunning aspiring leaders, and methods of property redistribution.

The Paleoindians relied upon durable and easily-shaped cryptocrystalline materials such as chert and jasper for their tools. They fashioned these rocks into a variety of instruments, among which were scrapers, gravers, and adzes. Paleoindian projectile points tended to be fluted and bifacially sharpened. Due to time and rising sea levels, many Paleoindian material culture finds are limited to isolated projectile points. Researchers differentiate the Paleoindian Period into three smaller periods reflecting changes in the morphology of projectile points. These periods include the Early Paleoindian (9500-9000 B.C.), the Middle Paleoindian (9000-8500 B.C.), and the Late Paleoindian (8500-8000 B.C.).

During the Early Paleoindian, Paleoindians produced large fluted Clovis points, a style widespread throughout North America, which could be affixed to a spear shaft. Sites from this period are found throughout the eastern seaboard in very low densities. Regions depicting greater concentrations of these sites are in Tennessee, the Cumberland and Ohio River Valley, western South Carolina, the northern Piedmont of North Carolina, and southern Virginia (Anderson 1990:164-71; Daniel 1996; Ward and Davis 1999).

The Middle Paleoindian saw a modification of Clovis points, such as the disappearance of the fluting in some cases and the addition of "ears" at the base of the point. The appearance of these new types, such as the Cumberland, Simpson, Clovis variants, and Suwanee points, might reflect changes in subsistence patterns as the result of rising global temperatures. During this time, it is theorized that American Indians began to radiate out from their previous range of occupation to exploit resources from more distant environments (Anderson 1990; Anderson et al. 1996; Ward and Davis 1999:31).

Changes to the projectile points intensified during the final centuries of the Paleoindian Period resulting in an increased number of changes in projectile point morphology. The Dalton and Hardaway types and other variants allowed late Paleoindian peoples to hunt new species.

The Paleoindian's scattered settlement pattern and simple culture contribute to the limited number of associated sites in the region, fewer than 75 sites have been identified in present-day Virginia and only 25 have been positively identified in the entire Chesapeake (Turner 1989; Dent 1995). Those Paleoindian sites that have been located tend to be quarry sites, which groups frequently visited and areas where several bands gathered (Meltzer 1988; McAvoy 1992). Many sites were likely destroyed when warming global temperatures melted the glaciers and inundated the low-lying Paleoindian settlements.

ARCHAIC PERIOD (8000 TO 1200 B.C.)

Dramatic climatic changes beginning about 10,000 years ago prompted a reconfiguration of prehistoric people's subsistence strategies and social organization. Specifically, global temperatures began rising with the dawn of the Holocene geological period, simultaneously shrinking the glaciers and raising sea levels. In North America, the Laurentide Ice Sheet gradually receded northward, making the southeastern portion of the modern-day United States warmer and drier. The boreal forest of the Pleistocene era slowly gave way to a mixed conifer and northern hardwood forest. The area began to assume its modern-day climate and floral and faunal species. This warming also resulted in dramatic hydrological changes for coastal Virginia. As the sea level gradually climbed, the land was flooded; as a result, the lower reaches of the Susquehanna River flooded to form the Chesapeake Bay.

These climatic changes created new food sources for prehistoric people. The warmer, drier climate led to a greater biodiversity, especially floral, as spruce and fir forests gave way to nut- and fruit-bearing trees (Aaron 2009:17). This allowed humans to rely more heavily on gathering wild plants, nuts, and berries. Indeed, archaeologists have discovered tools, such as nutting stones and pestles, for processing vegetable materials. The creation of the Chesapeake Bay, furthermore allowed Archaic people to exploit seafood, such as anadromous fish and shellfish. The appearance of shell middens during the period testifies to the importance of mollusks to the Archaic diet (Dent 1995).

To exploit these new resources, Archaic people likely intensified their seasonal movement, splitting their time between a semi-permanent base camp and smaller, dispersed hunting and gathering camps. Bands of as many as 30 people may have gathered in the base camp for part of the year, and then dispersed into "microbands," composed of a single family or two, in other seasons (Griffin 1952; Anderson and Hanson 1998; Ward and Davis 1999). The range of band movement would have occurred over relatively large regions. These larger base camps are theorized to have been located along rich environmental areas near the Fall Line or along main rivers.

New subsistence patterns also required new technologies and the adaption of existing technologies to be suitable to existing game. "The spear thrower [called an atlatl] added range and power to the hunter's arm. The axe enabled people to fell trees. The mortar and pestle made it easy to pound and grind nuts, seeds, and roots" (quoted in Aaron 2009:18). With new technologies, smaller game could be more easily hunted and plants could be processed more effectively. The resulting products

of these technologies differentiate the Archaic Period into three smaller periods. The period also saw innovations in projectile point manufacturing. In a further divergence with the Paleoindians who relied heavily on cryptocrystalline lithics, Archaic people utilized more materials, such as quartzite and quartz.

The Early Archaic (8000-6500 B.C.) is characterized by projectile points with corner and side-notches, rather than hafting the points to a wood shaft by fluting as the Paleoindians did. The resulting points, such as the Kirk Stemmed and Notched, Palmer Corner-Notched, Fort Nottoway, Kessell, Charleston, and Amos, are thus readily distinguishable from Paleoindian points (Custer 1990). Early Archaic people hunted caribous, elk, moose, deer, and bear (Egloff and Woodward 1992:12). Additionally, there appears to be an increase in population at this time.

The Middle Archaic (6500-3000 B.C.) is defined primarily by the appearance of stemmed projectile points which were fitted into a hold in the spear shaft. Therefore, points such as the LeCroy, Stanly, Morrow Mountain, and Guilford are diagnostic of Middle Archaic assemblages. Some evidence also points to the use of grinding technology to make atlatls, or spear throwers, in this period. Mortar and pestles also began to appear during the Middle Archaic, as did axes. The ability to more easily clear forests, resulted in a change in hunting as deer, bear, turkey, and other animals came to the cleared land to eat the new, low-lying growth (Egloff and Woodward 1992:14-15).

Researchers have also pointed out that contexts from this period contain a larger amount of "expedient" stone tools, owing in part to the rapid environmental changes of the Climatic Optimum, which dates from 6000 to 2000 B.C. (Wendland and Bryson 1974; Claggett and Cable 1982; Ward and Davis 1999). These tools were makeshift and less formal, allowing their owners to use them for a wider variety of activities than tools designed for specific uses. The greater density and disbursement of archaeological sites from this period indicates a consistent rise in American Indian populations.

By the Late Archaic (3000-1200 B.C.), a more congenial climate and more abundant food sources led to dramatic population increases, there are estimates of tens of thousands of Virginia Indians during this time (Egloff and Woodward 1992:20). To be certain, this apparent increase might be exaggerated because Late Archaic people had a richer material culture than previous peoples and hence left more archaeological evidence of their existence (Klein and Klatka 1991). Nonetheless, the greater number of Late Archaic sites relative to earlier periods suggests that the human population did in fact expand over the course of the Archaic Period. According to Barber et al. (1992), Late Archaic sites were more than twice as numerous as Middle Archaic sites. As humans occupied the land more densely, they also became more sedentary and less mobile, perhaps owing to the greater reliance on plant-based food resources compared to hunting and fishing. Late Archaic people settled along fertile flood plains (Egloff and Woodward 1992:20).

American Indians from this region may also have begun to domesticate plants such as goosefoot, squash, and gourds (Yarnell 1976:268; Chapman and Shea 1981:70). They also used squash and gourds for food storage, in addition to earthen pits (Egloff and Woodward 1992:22). The projectile point technology of the Late Archaic Period is dominated by stemmed and notched point forms, many with broad blades, likely used as projectiles or knives. These points diminish in size towards the latter portion of this period (Dent 1995; Justice 1995).

It should also be noted that prehistoric sites that consist of lithic debitage, no diagnostic artifacts, and an absence of ceramic artifacts likely date to the Archaic Period. These sites are described in the records as "Prehistoric/Unknown," however they are most likely to date to this period despite not having a specific temporal designation.

WOODLAND PERIOD (1200 B.C. TO 1600 A.D.)

The American Indians of the Woodland Period began to maintain a greater reliance on horticulture and agriculture based on the cultivation of maize, imported from Mesoamerica via the Mississippi Valley, as well as squash, beans, and other crops. This increased sedentism and the nucleating of societies (Klein and Klatka 1991; Mouer 1991). Populations during this time began to consolidate into villages near rivers and floodplains with fertile soil, favorable terrain, and access to fauna. Satellite procurement camps are far less frequent than in the Archaic Period.

The Woodland Period is defined foremost by the development of a ceramic technology for storing and cooking food. Although Archaic people had carved out vessels from soft soapstone, prehistoric Americans did not begin shaping ceramic vessels until around 1200 B.C. The earliest pottery produced on the coastal plain, the Marcey Creek Plain, and other types, in fact resembled those soapstone vessels, suggesting that they were used for similar purposes. Woodland peoples, however, modified the square- or oval-shape soapstone inspired vessels. They began decorating the pieces with cord and tempering them with soapstone and other types of grit to make them stronger. Examples include Selden Island ceramics (tempered with soapstone) and Accokeek pieces (which used sand and grit for tempering). Anthropologists divide the period up into smaller periods based on changing projectile points and ceramics, as well as settlement patterns.

The beginning of the Early Woodland (1200-500 B.C.) settlements in the Piedmont and Coastal regions of Virginia are located along rivers as American Indians developed a more sedentary lifestyle during this time (Klein and Klatka 1991; Mouer 1991). They began to rely more and more on horticulture and in the Coastal Region preferred floodplains and low-lying neckland with rich sandy soil (VDHR n.d.).

During the Middle Woodland (A.D. 300-1000), there is an increase in sites along major trunk streams and estuaries as people move away from smaller tributary areas and begin to organize into larger groups (Hantman and Klein 1992). The Middle Woodland diet becomes more complex as people begin to exploit nuts, amaranth, and chenopod seeds in addition to fish, deer, waterfowl, and turkey. Corn by this time had transformed into the large ears familiar today. The bow and arrow replaced spears for hunting (Egloff and Woodward 1992:25). Those in the Coastal Region continued to rely on resources from its saltwater and freshwater rivers, bays, marshes particularly fish and oysters (VDHR n.d.). With more specialized crafts and increased trade came status. Evidence of rank societies emerges more clearly with the spreading of religious and ritual behavior including symbols and regional styles apparent in ceramic styles and other sociotechnic and ideotechnic artifacts.

Variance in ceramic manufacture is a hallmark of the Middle Woodland Period. Pope's Creek ceramics are associated with the beginning of this period, and Mockely ceramics with the later. Pope's Creek ceramics are tempered with medium to coarse sand, with occasional quartz inclusions, and interior scoring has also been recorded (Stephenson 1963:94; McLearen and Mouer

1989). The majority of Pope's Creek ceramics have net-impressed surfaces (Egloff and Potter 1982:99; McLearen and Mouer 1989:5). Shell-tempered Mockley ceramics first appeared around 200 A.D. in Virginia to southern Delaware. There was a variation in surface treatments for Mockley that included plain, cord-marked, and net-impressed (Egloff and Potter 1982:103; Potter 1993:62).

By the Late Woodland Period (900-1600 A.D.), the use of domesticated plants had assumed a role of major importance in the prehistoric subsistence system. The adoption of agriculture represented a major change in the prehistoric subsistence economy and settlement patterns. Expanses of arable land became a dominant settlement factor, and sites were located on fertile floodplain soils or, in many cases, on higher terraces or ridges adjacent to them. American Indians began to organize into villages and small hamlets that were sometimes highly nucleated and occasionally fortified with palisades. "Coastal Plain people built their villages creating many long, oval houses either spaced close together and surrounded by a palisade, or dispersed, separated by fields for gardening" (VDHR n.d.).

Around 1150 A.D. Cashie Ware began to appear. Cashie Ware was made "with wicker-fabric of medium to narrow width, simple stamped, and plain surface treatments" and had slightly angular to rounded quartz pebbles for temper (Egloff and Potter 1982:109). While Cashie Ware was widespread throughout the interior Coastal Plain of North Carolina, it occurred in Greensville, Southampton, and Sussex counties of Virginia as Branchville Ware (Egloff and Potter 1982:109). This indicates that type was shared by the Iroquois Tribe.

Most of the coastal Virginia Indians, with the exception of the Meherrins and the Nottoways, were Algonquian-speaking people (Egloff and Woodward 2000:43). The majority of this population of approximately 14,000 to 21,000 were brought under the rule of Wahunsunacock, who formed the Powhatan chiefdom by the early seventeenth century (Egloff and Woodward 2000:43).

SETTLEMENT TO SOCIETY (1607 – 1750)

Upon the arrival of Europeans to Virginia, American Indian towns and villages lined the James River (Figure 5-2). The vicinity of present-day Isle of Wight County was occupied by the Worrosquoyackes living in the two major villages of Mathomank, near present-day Burwell's Bay, and Mokete, at Pagan Point. Though the tribes' primary villages were along the James River, they used interior lands up to at least 20 miles inland (King 1993:1). The Quiyoughcohannock occupied Surry County in four towns dotting the roughly 100 square miles between the Upper and Lower Chippokes creeks (Geraghty 2019).

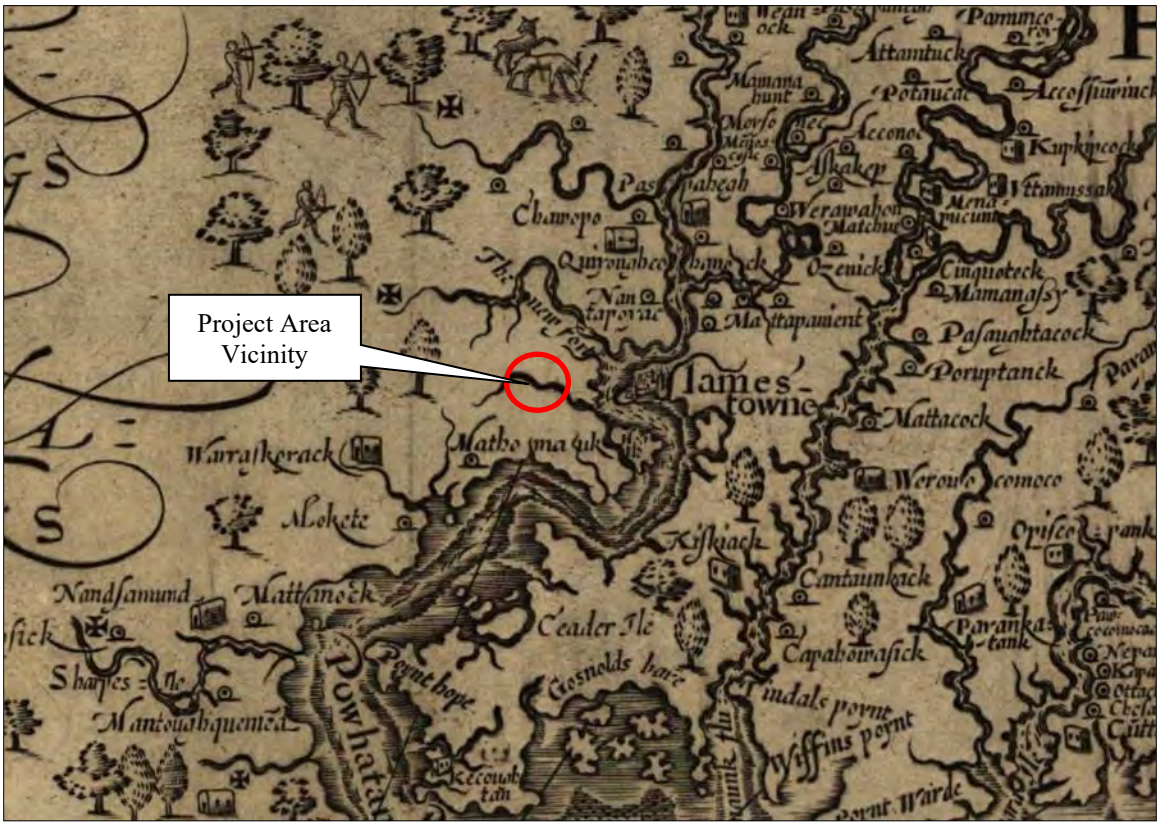

Figure 5-2: Detail of *Virginia, Discovered and Described* [sic], by John Smith, depicting the general vicinity of the study area. Source: Library of Congress

On April 26, 1607, three ships commanded by Capt. Christopher Newport and sponsored by the proprietary London Company section of the Virginia Company made their first landfall in North America at Cape Henry, in the northeastern part of present-day Virginia Beach (City of). The crew landed just temporarily, and soon left the cape to seek a site further inland which would be more sheltered from ships of competing European countries. They sailed roughly 50 miles up the James River to where they established a fort at Jamestown in May 1607. Life at Jamestown was initially harsh, with the settlers suffering from starvation, disease, and attack by the native peoples.

In the spring of 1608, Capt. John Smith was driven by the necessity of finding food for the famished settlers. He crossed the James River into what is now Isle of Wight County and obtained bushels of corn from the Warraskoyak. While these American Indians initially acted kindly to the suffering settlers, in a few years they nearly killed every colonist on the south side of the James River (Morrison and Gwaltney 2006). The new settlers made some attempts to make use of the land to aid in their survival and in 1608 they began keeping hogs on Hog Island, eight miles north of the study area; a garrison was also placed on the island to warn Jamestown of approaching European enemies.

The Virginia Company's search for an income producing product in the colony came to fruition with John Rolfe's successful experimentation with tobacco in the early 1610s. The crop became the dominant crop of the colony and determined the pattern of nearly every aspect of life, encompassing the economy, the cultural landscape, and social relations (Kulikoff 1986; Moore

1976). Increased growth of the labor intensive crop also led to more land hungry planters and increased use of indentured servants followed by enslaved individuals.

English settlement slowly spread along the James River. By 1619, Captain Christopher Lawne and Sir Richard Worsely initiated settlement on the south side of the James at Lawne's Creek, now roughly the dividing line of Isle of Wight and Surry Counties. Originally known as Lawne's Plantation, the London Company changed the name of the area to Isle of Wight Plantation in 1625. By 1620, there had been six land patents in what would become Surry County (Atkins 2008). While the south side of the James River was rich, the lands were fringed by swamps and the harbors were fewer and shallower making the area a bit less desirable (Rouse 1968:17). The continued spreading of European settlement, however, increasingly stressed relations between them and American Indians.

Chief Powhatan died in 1619 and control over the chiefdom was passed to his brother Opechancanough who planned to eradicate the English from Virginia (Tyler 1990:13). The murder of the Indian Nemattanew in early March 1622 provided pretext for a mass attack. On the morning of March 22, members of the Powhatan Confederacy and the Chickahominy Tribe killed English colonists along a 70-mile stretch on both sides of the James River. The result was a loss of more than a quarter of the total European population. Some English were saved through the actions of the Virginia Indian Chanco who warned Richard Pace, a resident of Surry County (King 1993:4). For the next decade, Virginia was in a state of open warfare between the two entities.

English settlement continued to spread and some individuals were able to gain vast tracts of land, first along the major navigable waterways and then on the interior lands. In Virginia, the head right system was followed in the distribution of land. During the first hundred years of settlement, a grant of fifty acres was given for the importation of every emigrant (Morrison and Gwaltney 2006). In this way, the size of land granted varied greatly. Using this system, many patents were distributed. The river front on the James was largely settled in the 1630s; in Surry County alone 147 original land patents have been identified in this decade (Atkins 2008).

By 1634, the population of the Virginia Colony had grown to the point that King Charles I directed the formation of eight shires (counties). James City County spanned both sides of the James River and encompassed Surry County. To the east of it was Warroaquyoake, later renamed Isle of Wight and the wharf village of Smithfield was chosen as the county seat (Rouse 1969:67). Despite the patented land on the south side, Surry County historian James Kornwulf observed that "Today the region is one of the most heavily forested and least densely settled regions of the county…although there is ample evidence it was heavily planted in the seventeenth century" (quoted in Laird et al. 2017:16).

The growth in population saved the colony when Opechancanough planned a second uprising in 1644. Although more than 500 settlers lost their lives, by this time the colony was well established and the loss did not seriously threaten its survival (Whittenburg and Coski 1989:21). The resulting treaty, Treaty of 1646, saw the loss of Virginia Indian's land between the York and Blackwater rivers (Egloff and Woodward 2000:45).

Approximately eight miles south of the James River was the upland (Kelly 1979:184). From this point south, waterways drained into the Blackwater River which, in turn, drained into the

Albemarle Sound in North Carolina. The Sound, unlike the Chesapeake Bay, had no ports which placed a constraint on settlement and early planters trying to get products to markets. It is likely for this reason that the land was worth less than that closer to the James River. In the 1690s, the average land values were 51.1 pounds of tobacco per acre along the James and only 16.9 pounds around the Blackwater (Atkins 2008).

Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland (Figure 5-3). The swamps that drained into the Blackwater River appear to have been numbered north to south. For example, Second Swamp (also known as Delk's Swamp, Passenger Swamp, and Pouches Swamp) extends south through the study area (King 1993:441).

Several swamps drain into the Blackwater. Settlers, and Virginia Indians before them, would have found an abundance of game in the swampy lands (Bohannan 2002:75). It appears that patenting of land around Second Swamp began in the mid-seventeenth century. For example, large landholders in the vicinity of the swamp in Isle of Wight County include Robert Flack, George Moore, and Job Bearly ("Isle of Wight County Records" 1899).

As indicated earlier by the Surry County historian, lands on the south side of the James River had ample forests. This would lead to a second good produced by the region: timber. Timber was exported as early as the European settling of the colony when Captain Newport took oak poles back to England for ships' masts in 1607 (Rouse 1968:33). This industry continues to the present day. The original use of Hog Island to keep hogs portended to another industry in the region: the raising of hogs. Many dwellings had large, deep, brick cellars which could be used for the storage of bacon and lard, among other things. As such, a trade in bacon began and continued to the present. Bacon was traded in the West Indies for sugar, coffee, and rum (Morrison and Gwaltney 2006). With the growth and success on the south side, a new county was created in 1652. It was called Surry in reference to London south of the Thames River, Surrey (Rouse 1968:18). The original county extended south to the North Carolina border (Apel and Watson 2006:29).

The relative calm that had settled within the colony would soon be disrupted with Bacon's Rebellion in 1676. Nathaniel Bacon and his followers led a revolt against their perceived aggressors, American Indians, and the Governor of Virginia, Sir William Berkeley. In Surry County, Bacon's supporters seized an early dwelling owned by Arthur Allen, about three miles northeast of the study area. The dwelling may have been used as a fort, possibly leading to the name of Bacon's Castle (Bohannan 2002:16). Unrest would repeat in the region in the early eighteenth century. Slave insurrections were planned in 1709 and 1710 in Surry and Isle of Wight counties. In the 1709 plan, the foiled uprising involved both African and American Indian slaves (Holloway n.d.).

After the first legal settlement south of the Blackwater River in 1701, settlement quickly accelerated. By 1730, there were more residents south of the Blackwater than north for the first time leading to the creation of new counties from Isle of Wight and Surry counties in the 1740s and 1750s (Atkins 2008). Within one mile of the study area, some dwellings were being constructed by this time. For example, the Stratman House (VDHR #090-0051) was built c.1750.

Figure 5-3: Detail of *Virginia and Maryland as it is planted and inhabited this present year 1670* depicting the vicinity of the study area. Source: Library of Congress

COLONY TO NATION (1750 – 1789)

The economy continued to grow as additional agricultural land was cleared and cultivated. Tobacco continued to be the principal crop during this period, however as the century entered the fourth quarter the tobacco economy began to falter. Severe soil depletion from continuous cultivation of tobacco, particularly in the sandy soils in the counties that were not conducive for growing tobacco, coupled with the collapse of the European tobacco market precipitated a shift the economy and farmers began to diversify. The farms in Isle of Wight County at this time were typically between 500 to 1,700 acres (David 2007:9).

To aid in getting their goods to market, two early major north-south roads extended through the two counties; the study area was situated between them (Figure 5-4). Additionally, the village of Surry, six miles northwest of the study area, grew as a crossroads. A stagecoach route connecting Petersburg and Portsmouth crossed the town by 1787 (Apel and Watson 2006:18). By this time, the town boasted of two stores, a tavern, an armory, and a cotton factory (Apel and Watson 2006:18). Smithfield officially became a town in 1752 and the main stage road from Norfolk to Richmond passed through it (Morrison and Gwaltney 2006).

While the market for crops grown in Virginia and throughout America was in high demand in European markets, tensions between the colonies and England began to put a strain on trade. At the end of the Seven Years' War (or the French and Indian War in North America) in 1763, the British government had an immense amount of debt. To pay it, Parliament imposed heavy taxes on its subjects and tightened the administration of trade and navigation acts (Salmon 1983:22).

These actions sparked a strong response from the colonies. In 1774, the Virginia Convention adopted resolves against the importation of British goods and the importation of slaves. It also required each county to form a volunteer company of cavalry or infantry to prepare for an armed conflict.

Counties on the south side of the James River prepared to fight, supplying men and materials to the cause (Atkins 2008). For example, in addition to the "725 men of military age", residents of Isle of Wight County provided relief vessels and financed privateering vessels (King 1993:64; David 2007:9). Additionally, the seventeenth century fort on Burwell Bay was fortified and renamed Fort Boykin (David 2007:9). The British passed through the region twice under British Cavalry Colonel Tarleton. He and his men made a raid on Smithfield with the intent to destroy the records; the records were previously removed. The British left a wake of destruction wherever they went (Morrison and Gwaltney 2006).

Following the Battle of Greenspring, the main body of the British Army under Charles Cornwallis crossed the James River traveled to Portsmouth. Though no battles were fought in Isle of Wight and Surry counties, the war was won a mere 18 miles northeast of the study area on the Virginia Peninsula.

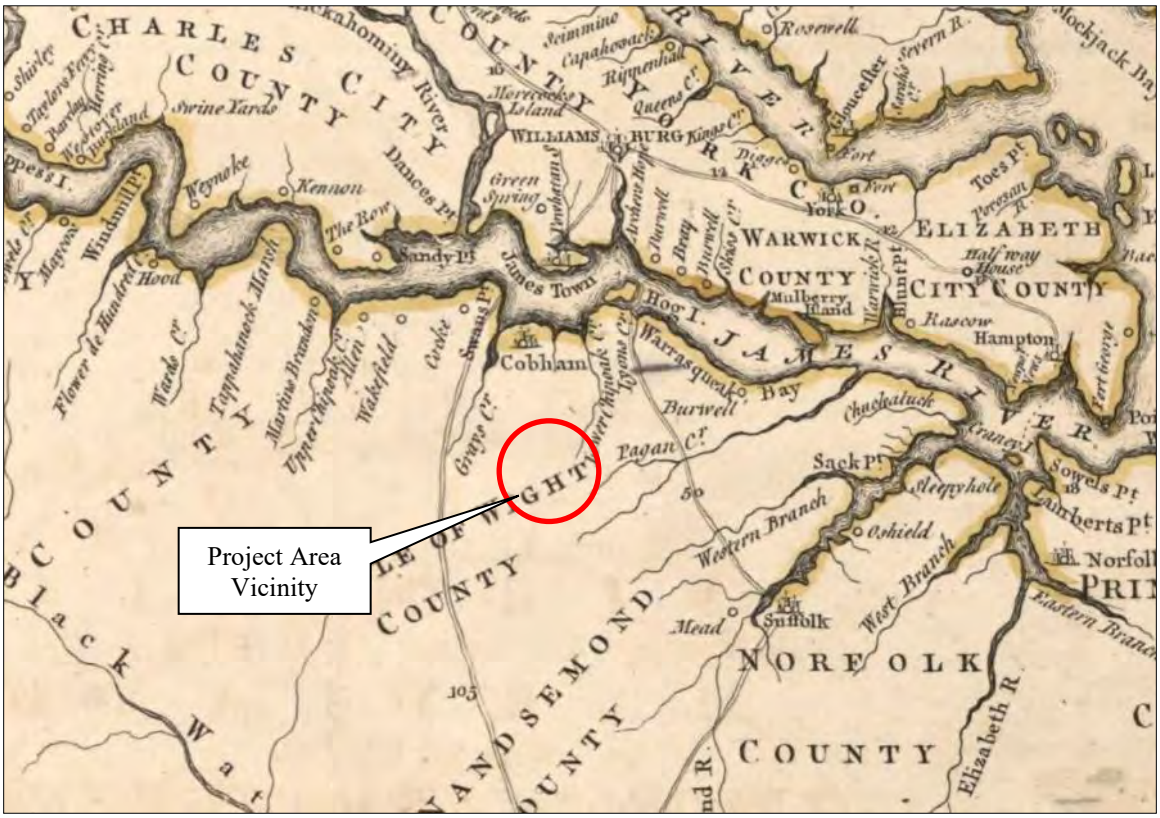

Figure 5-4: Detail of *A map of the most inhabited part of Virginia….*, by Fry in 1755, depicting the vicinity of the study area. Source: Library of Virginia

EARLY NATIONAL PERIOD (1789 – 1830)

Following American independence, Virginia entered a period of considerable change. The intensive tobacco cultivation previously pursued in the area had succeeded in severely depleting the area's soils of much-needed nutrients, making the crop unprofitable and leading farmers to explore other options. Over time, farmers in southeast Virginia turned to corn and grains, cotton, orchards, livestock, and finally peanuts and soybeans (King 1993:192). The value of farmland in the region increased dramatically in the early nineteenth century (Agee 1969). In Surry County, for example, the value of land, per acre, in 1800 was $1.65; in 1820 it had jumped to $4.81 (Agee 1969:36).

The almost exclusively agrarian society was beginning to accommodate urban centers and small hamlets, although farming continued to be the primary means of livelihood (Traceries 1993). While the population remained relatively steady, there was a shift to the southern half of the county as people were enticed by the open lands and inland roadways. At the first federal census in 1790, Surry County had 6,227 residents and Isle of Wight County had 9,028 (USCB). During this period the population of each county rose slightly to 7,109 residents in Surry and 10,517 in Isle of Wight (USCB).

When war broke out with Great Britain once more in 1811, the young men of Virginia stood ready to fight. Because the War of 1812 was primarily a sea war in Virginia, Norfolk was a highly vulnerable spot though towns along the shores of the state's major rivers were also at risk (King 1993:66). One of the major issues to wealthy white citizens that the war caused concerned slavery and Britain's declaration of freedom if slaves stood alongside the Great Britain.

Among the major issues facing farmers throughout Virginia in the early nineteenth century was that of inadequate roads which hampered their ability to get goods to markets. The poor condition of the network of roads and bridges, lack of navigable watercourses, and long distances to larger markets restricted growth of the area's economy. The solution to these problems was found in the internal improvement movement of the early nineteenth century. The construction and maintenance of roads had long been the responsibility of localities. Finally, in 1816, the General Assembly created the Fund for Internal Improvement and appointed the Board of Public Works to oversee its use; transportation improvement projects would receive the funding they needed to complete projects (O'Dell 1989). By the late 1820s, it appears that several major roads were in the vicinity of the study area (Figure 5-5).

Around the turn of the nineteenth century, dwellings were being constructed within and in the vicinity of the study area. This included the Jones House (VDHR #046-0065, Area D), the Gale Farm (VDHR #046-0066, Area C), the Pons House (VDHR #046-0067, near Area C), the Delk Farm (VDHR #046-0069, near Area E), Dewes Plantation (VDHR #046-0082, near Area E), the Allmond House (VDHR #090-0053, near Area C), the Dais/Ida House (VDHR #090-0059, Area D).

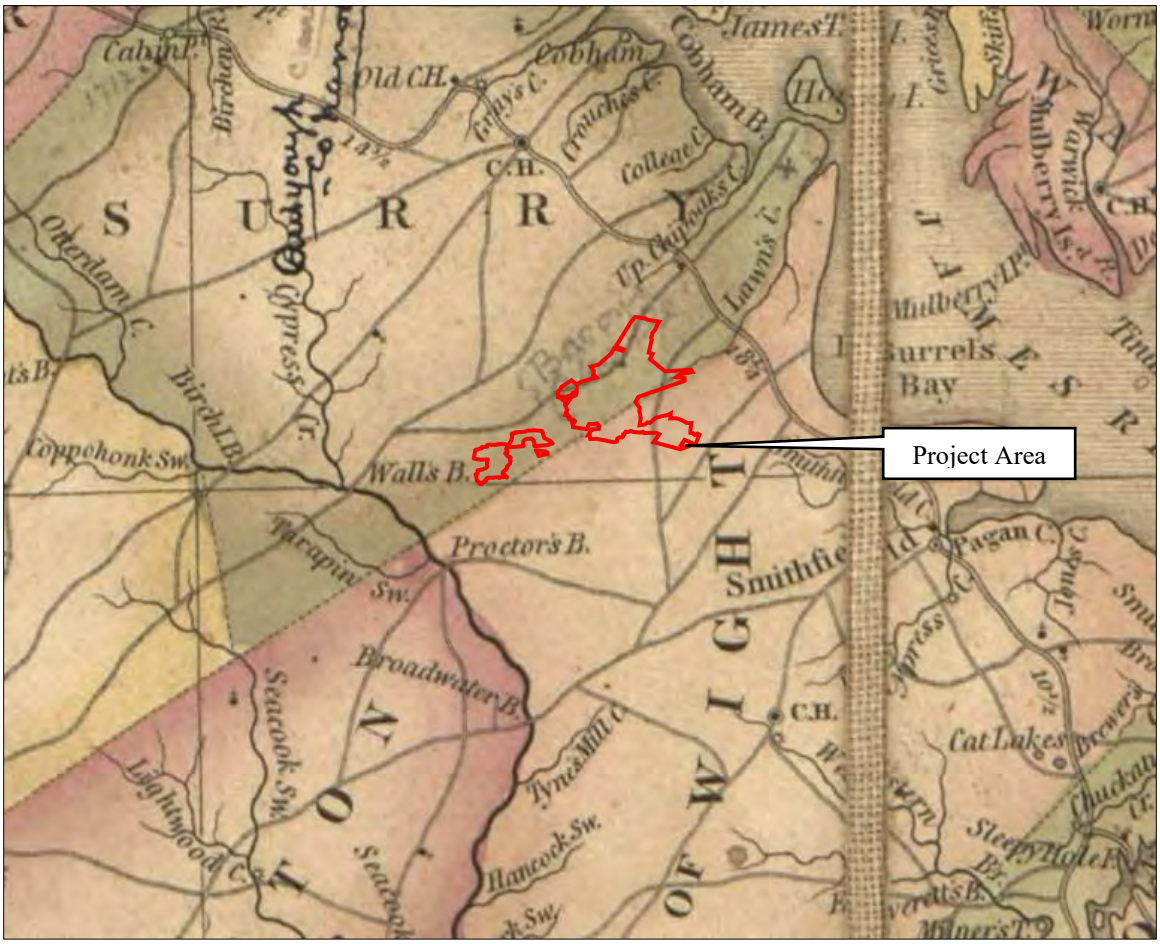

Figure 5-5: Detail of *A map of the state of Virginia*, 1827, depicting the vicinity of the study area. Source: Library of Congress

ANTEBELLUM PERIOD (1830 – 1860)

By the 1830s, a lasting migration from older settled regions of Virginia to lands opening in the west and an agricultural depression affected area's commerce and population. Between 1830 and 1850, the population of Isle of Wight County decreased 11 percent and that of Surry County fell by more than 13 percent (USCB). Despite the drop in population, the enslaved and free black population remained about 50 percent of the total population. The high slave population led to unease and in 1831 there was an insurrection in nearby Southampton County; it became known as Nat Turner's Rebellion. Troops from Isle of Wight, Nansemond, and Surry counties guarded the borders of the counties to prevent an escape of the insurgents to the Dismal Swamp (Drewry 1900:83). The insurrection prompted scared white citizens to strengthen rules regarding slaves and free blacks (Atkins 2008).

Approximately 90 percent of this total population was involved in agriculture and identified as farmers (David 2007:10). The diversification of crops throughout the Commonwealth continued and by 1859 Virginia was producing only 28.4 percent of the nation's tobacco (Agee 1969:21). Crops that took the place of tobacco in southeast Virginia included cotton, corn, and peanuts. Before the Civil War, peanuts, also known as "goober peas" or "ground peas" were little known outside of the southern states (Morrison and Gwaltney 2006). Isle of Wight's first peanut export

was in 1849; the county would eventually become the center of the peanut belt (David 2007:10). Additionally, the ham and bacon industry continued growing. Before the coming of the railroad, the bacon trade reached out 30 to 40 miles into surrounding counties and hogs were driven in by foot from as far away as Kentucky, Tennessee, and North Carolina (Morrison and Gwaltney 2006). The railroad would create a bigger market.

The Norfolk and Petersburg Railroad was chartered in 1851 and completed in 1858, approximately eight miles southwest of the study area, and extended through southern Isle of Wight County (King 1993: 241). The first railroad in Surry County, in 1854, was located at the northern end of the county and was related to the timber business (Atkins 2008).

Despite the number of marshes crossing the study area, structures within it and in the vicinity were common by the mid-nineteenth century (Figures 5-6 and 5-7). Families identified within the study area on Civil War period maps include Jones, White, and Wilson, though the area also includes unidentified houses; a small crossroads may have been forming just outside of the study area (Area C) at Sykes Store by this time. There may have been a mill within the study area (Area C) in 1900 (Figure 5-8).

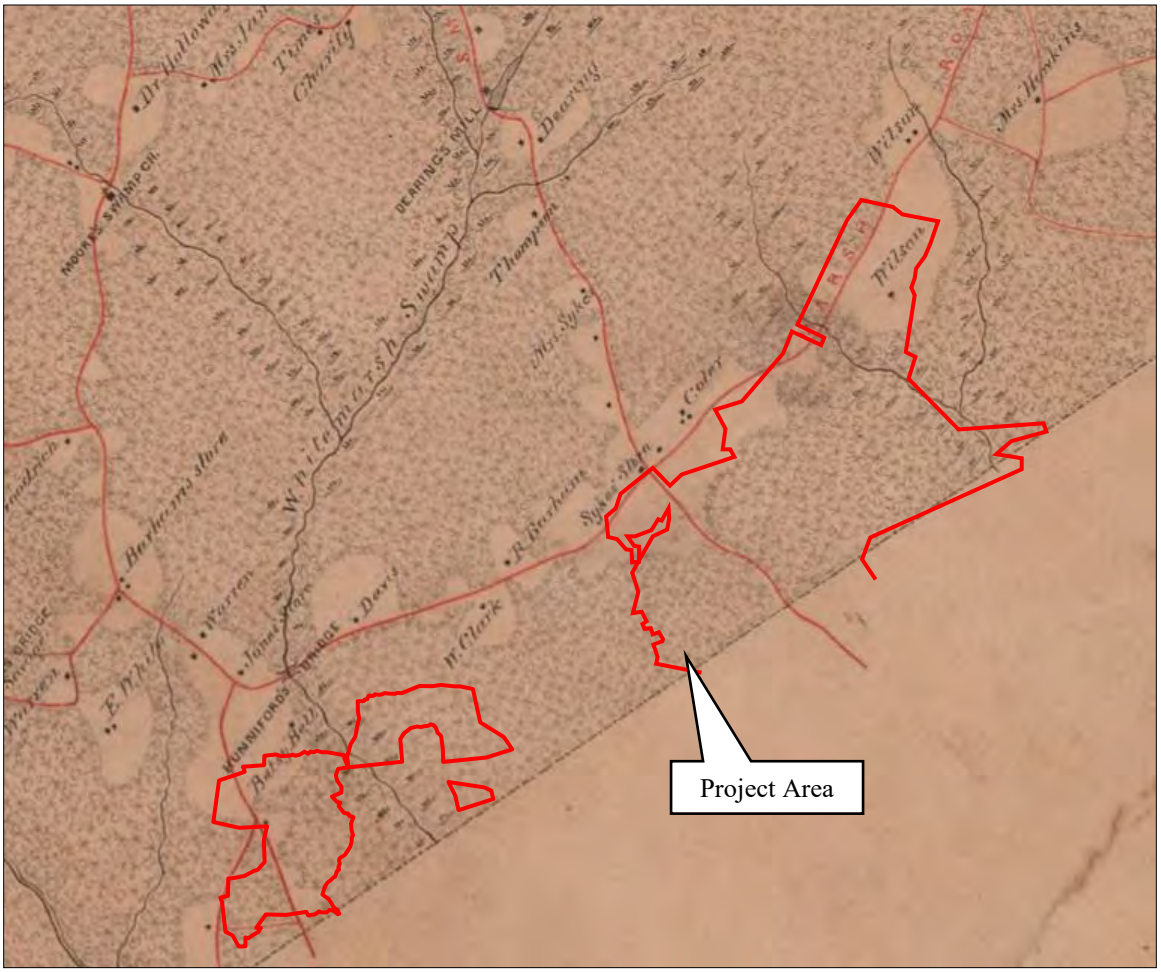

Figure 5-6: Detail of *Map of Surry Sussex and Southampton counties, Virginia*, 1863, depicting the study area in Surry County. Source: Library of Congress

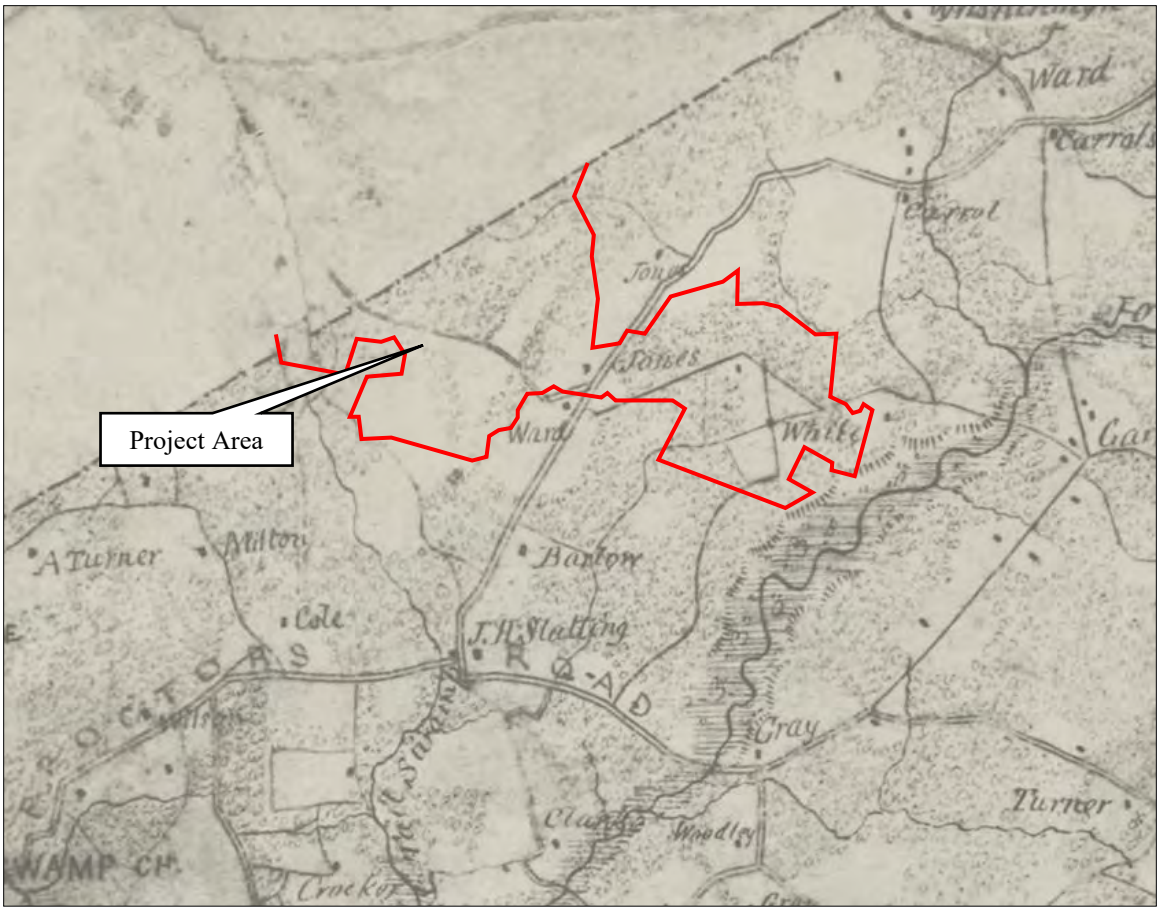

Figure 5-7: Detail of *Map of Isle of Wight and part of Nansemond*, 1864, depicting the study area in Isle of Wight County. Source: Library of Congress

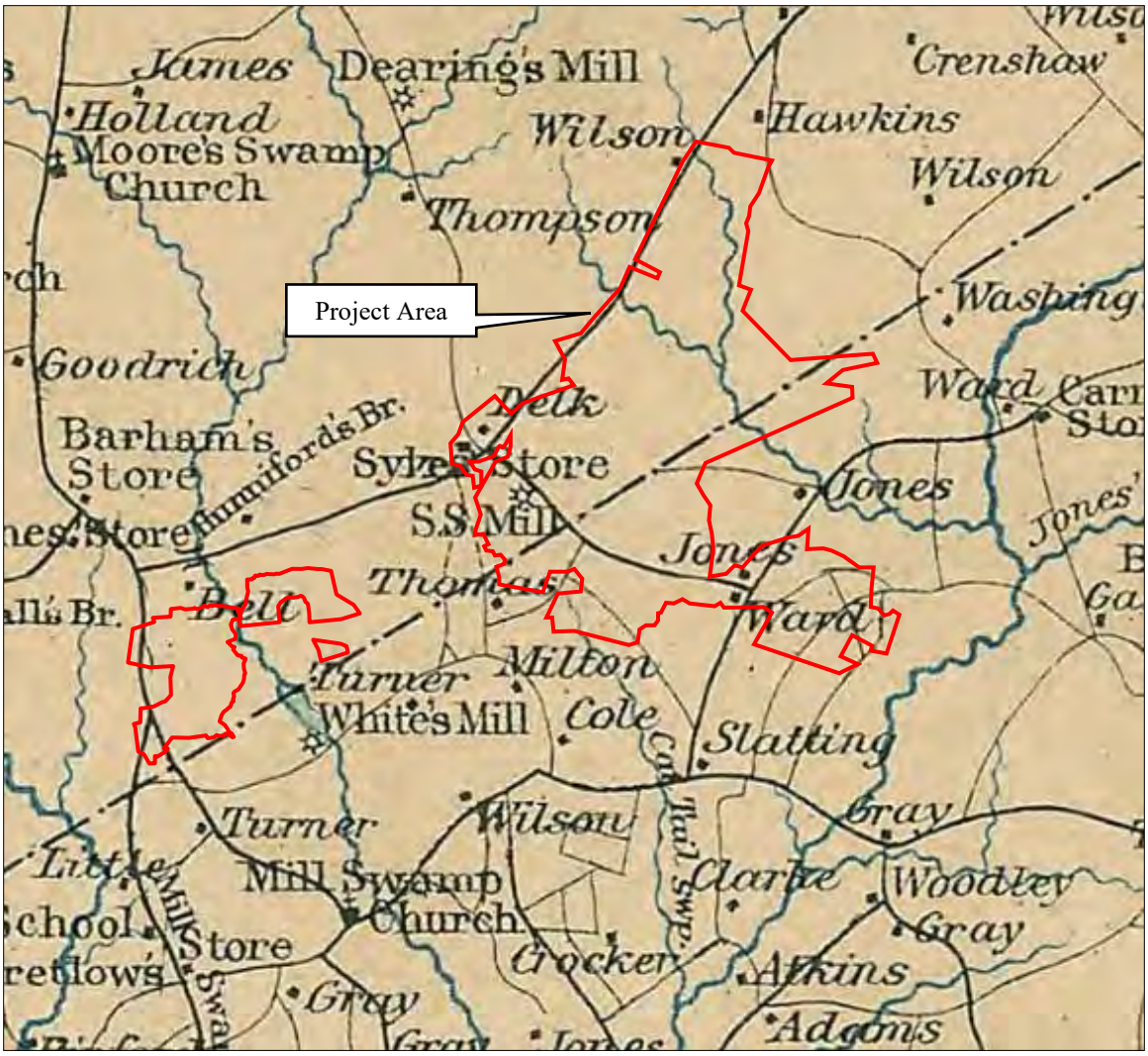

Figure 5-8: Detail of *Preliminary map of a part of the south side of James River, Va.,* 1906, depicting the study area. Source: Library of Congress

CIVIL WAR (1861 – 1865)

As an old, settled area of Tidewater Virginia, Isle of Wight and Surry counties continued to have a large proportion of residents that were enslaved. When the counties voted on the issue of secession on April 17, 1861, both were pro-secession. On the coast of Isle of Wight County, two forts were constructed or reinstituted during the war, Fort Huger and Fort Boykin. With their proximity to Union forces in Hopewell and Petersburg, Surry County soldiers served as scouts (Atkins 2008).

No major battles took place in Isle of Wight or Surry counties. A skirmish did occur in Smithfield in 1864. Early in 1862, Confederates were forced out of the Smithfield area and all bridges were burned and by 1864 Union gunboats controlled the James River. In January of that year, a federal steamer was fired upon by a Confederate contingent in Smithfield. The steamer was soon refloated and got aid from Newport News. The Federals came ashore and forced the Rebels to flee. While waiting for their return boat to Newport News, the Rebels fired upon Union forces. The Federals

were able to board their boat only to get stuck in mud at which point they were taken prisoner and the boat was burned (King 1993:172, 174).

There was also a skirmish in Surry County on the Blackwater River. Confederate soldiers were holding a bridge over the river when, in May, Federals attempted to cross. Having much larger numbers, Union forces succeeded and the Rebels abandoned their position (Atkins 2008).

On the home front, the succulent flavor of Smithfield meat emerged during Civil War. As farms were not operating to the same capacity as previously, farmers began to let pigs root in fields where peanuts had been dug (Rouse 1968:15). They found peanut-fed hogs far more palatable than those which had foraged the woods (Rouse 1968:15).

RECONSTRUCTION AND GROWTH (1865 – 1917)

While no large battles were fought in Isle of Wight and Surry counties, the economies were devastated and redevelopment of the agricultural economy was slow. Though Surry County was generally quiet after the war, around Bacon's Castle there was unrest between former enslaved individuals and the white population. In 1868 and 1869, homes, schools, and churches were burned (Atkins 2008). In Isle of Wight County, residents feared armed former slaves who refused to work (King 1993:181). A resolution was made to disarm them. This resolution stated "That as a general thing the Negroes are indisposed to hire themselves out by the year and thus rendering the cultivation of the land exceedingly uncertain. The court therefore respectfully asks that they may be compelled, in some way, to engage in some regular calling whereby they may be enabled to support themselves and render a public service" (quoted in King 1993:181).

The longstanding agricultural economy of Tidewater Virginia began to recover. The production of peanuts increased, their cultivation improved, and, by the aid of special implements, their production was cheapened. The value of the crop was estimated to be not less than three million dollars for the nuts alone (Morrison and Gwaltney 2006). P.D. Gwaltney and Company was created in 1870 for the shipping of ham and peanuts. The company grew dramatically in the late nineteenth century and by 1898 it had become the largest peanut company in the world (David 2007:13). Added to this is the value of the peanut vines in serving as a forage crop for horses and cattle and nuts on the ground for hogs (Morrison and Gwaltney 2006). In addition to peanuts, Isle of Wight County produced oats, potatoes, fruits, vegetables, and oysters (Morrison and Gwaltney 2006). Farms, growing peanuts and other products, were sprinkled throughout the study area.

Timbering also prospered during this period aided by northern investors (Rouse 1968:34). For example, David Steel, of Delaware, began the Surry Lumber Company in 1873 (Rouse 1968:34). The town of Dendron, about six miles west of the study area, grew around this company and the construction of several sawmills (Apel and Watson 2006:22). The lumber company also chartered the Surry, Sussex & Southampton Railway (SS&S) to haul products (Apel and Watson 2006:22). A small lumber railroad would eventually extend through the study area (Areas C and D) from Passenger Swamp to the town of Surry. Included among the various lumber companies in Isle of Wight were Watkins Lumber Company, Cumberland Lumber Company, and Kirk Lumber Company (David 2007:13).

Finally, Smithfield's early trade in bacon and ham gave rise to attention in the feeding and slaughtering of hogs and curing of bacon. In the early twentieth century, Smithfield's shipment of cured hams was about 40,000 (Morrison and Gwaltney 2007). With these important industries, the financial condition of counties improved by the close of the nineteenth century and population increased. Between 1870 and 1910, the population of Isle of Wight County increased by 79 percent from 8,320 residents to 14,929; the population of Surry County increased by 74 percent from 5,585 inhabitants to 9,715 (USCB).

As population increased, commerce also grew, particularly along the intersections of major inland roadways in the form crossroad stores. With improved inland transportation corridors, crossroads stores became more common. Many of these crossroads merchants took advantage of the expanded postal system and operated post offices from their stores. Between 1865 and 1900, the number of post offices increased dramatically from 28,882 post offices nationwide to 76,688 post offices in 1900 (David 2007:15). A 1906 map of Virginia illustrates a number of post offices in the vicinity of the study area (Figure 5-9). Rural free delivery came to the county in 1907. This would eliminate the need for the multiple post offices found in crossroads stores. Post offices in the vicinity of the study area include Bob's, Pons, Old Mill, Berryman, and Itata.

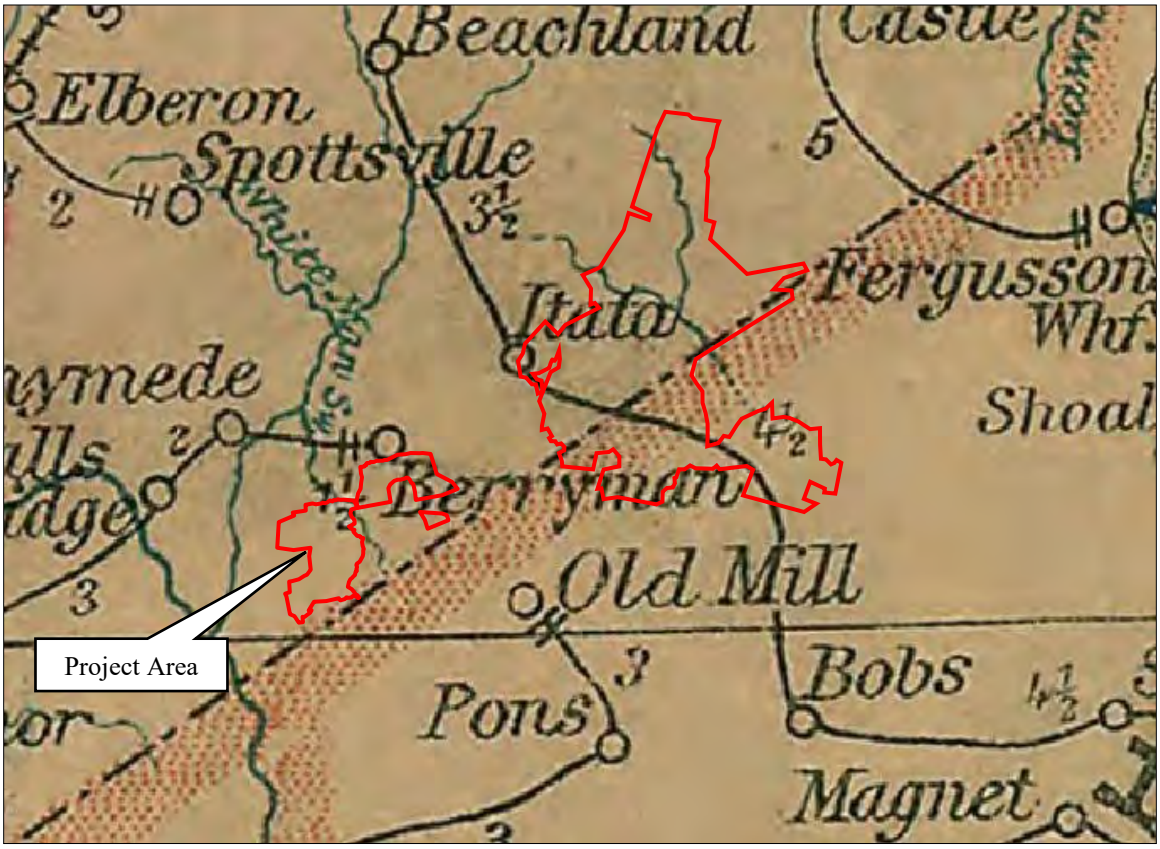

Figure 5-9: Detail of *Post route map of the states of Virginia and West Virginia,* 1906, depicting the study area. Source: Library of Congress

WORLD WAR I TO WORLD WAR II (1917 – 1945)

The peanut, lumber, and hog industries in Tidewater Virginia continued as the twentieth century progressed. The peanut industry took a downfall in 1921 when P.D. Gwaltney's factories were destroyed by fire. Although processing of the legume ended in Smithfield, neighboring Suffolk became a major peanut processing hub with the growth of Planters Peanuts (David 2007:18). With the loss of the peanut factories, in Isle of Wight County the primary industry transitioned to meat packing, most notably of ham (Morrison and Gwaltney 2007).

The Surry Lumber Company reached its peak in the 1920s (Apel and Watson 2006:22). However, the supply of trees decreased leading to the closing of mills in 1927 and the termination of the SS&S Railway (Apel and Watson 2006:23).

Among other agricultural endeavors in the county was the dairy industry. Cows had long been important in the region, requiring little attention as they were able to forage in the marshes and swamps. By the 1930s, there were many dairies (King 1993:208).

The two world wars' demanded sacrifices from the Commonwealth's residents while they also prepared the way for new opportunities. Residents of the counties did their part to serve the war effort, either by continuing to produce food and products for use or enlisting in the military as members of Simmons and Bailey families of Surry County, possibly in the vicinity of Area C and D of the study area, did in World War II.

As farmers faced hardships and the industry became more mechanized, the population in the counties fell. While the population of Isle of Wight County population decreased by seven percent from 14,433 to 13,381 residents; that of Surry County fell by 33 percent from 9,305 to 6,193 inhabitants (USCB). Despite hardships brought on by weather, mechanization, and the Great Depression, agriculture remained the economic mainstay of counties and commercial centers provided processing facilities for the products and access to export goods (David 2007:18).

Topographic maps from 1907 and 1919 clearly illustrate the number of swamps and pocosins within the study area as well as the development that had occurred along the major and minor roads (Figure 5-10).

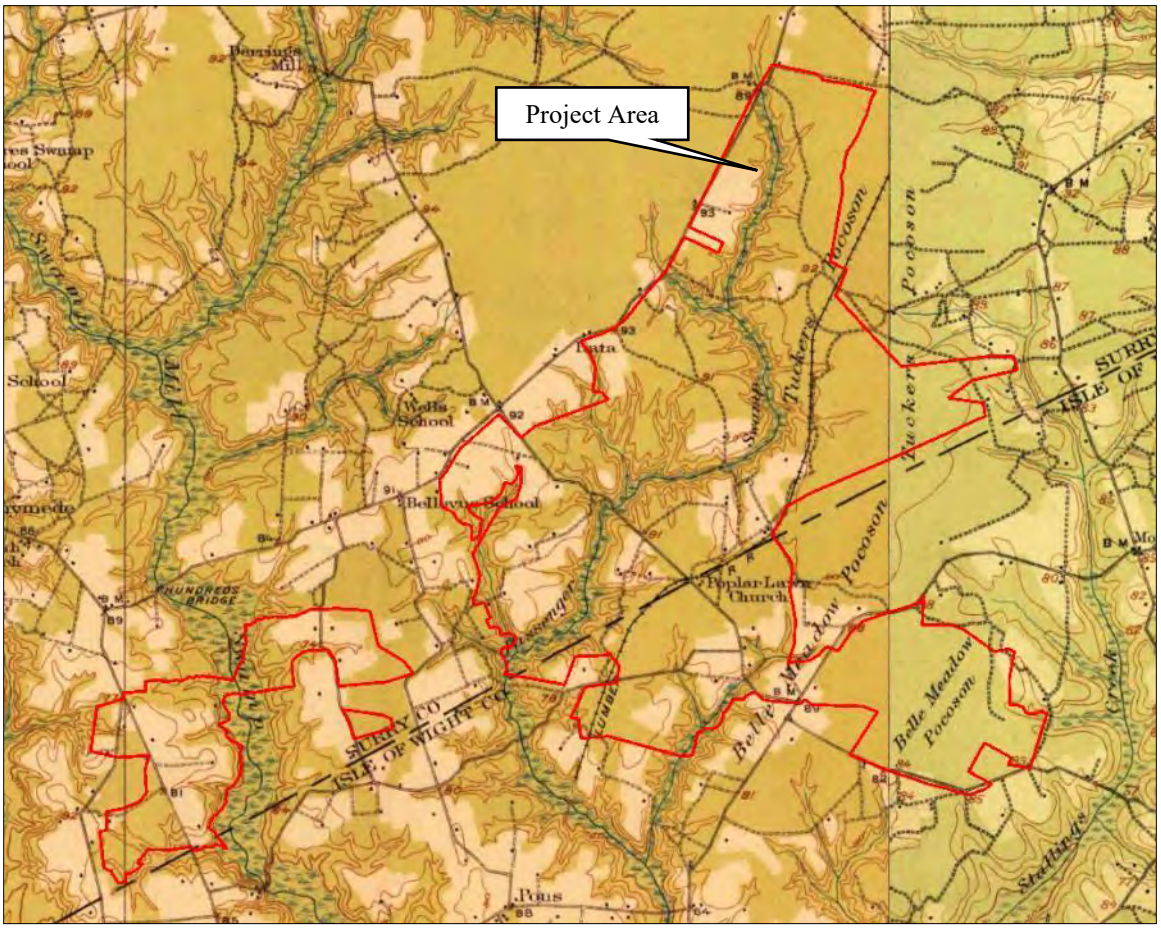

Figure 5-10: Detail of topographic maps *Surry* (1919) and *Yorktown* (1907) depicting the study area. Source: USGS

NEW DOMINION (1945 – PRESENT)

The end of World War II brought with it a building boom that would begin to change the character of Virginia as a whole and the counties in which study area lay, particularly Isle of Wight County. With its proximity to Newport News, Portsmouth, and Norfolk, the county began to become a bedroom community. With the spread of the cities and improved transportation routes, the northern half would be impacted, and more single family dwellings began to line the roadways shielding the vast open field behind (David 2007:19).

The face of agriculture also began to change. By the end of World War II, Virginia was no longer the leading producer of peanuts. In 2002, the end of government support and allotment forced many smaller farmers out of business. While peanuts are still a force in Western Tidewater and they continued to be the most reliably profitable crop even for smaller-scale producers, China and Brazil are now the dominant players in the global peanut market (Bearinger n.d.). Over time, the dairies in the region also went out of business (King 1993:209).

Conversely, the meat packing industry of Isle of Wight County and the hog and cattle farms in Surry County would continue to grow, and the timbering industry in the region as a whole contributes its economy. Isle of Wight County would become home to two Fortune 500 companies:

Smithfield Foods and International Paper Company. Because of the significant amount of timbering that has taken place throughout the Commonwealth, in the second half of the twentieth century Virginia Forests, Inc. became active (Rouse 1968:37). Among their work was providing pine seedlings to any landowners willing to plant them in cut-over forests and eroding fields (Rouse 1968:37). In addition to stabilizing the soil it would continue the industry since the trees would be ready for harvesting after a period of twenty years (Rouse 1969:37).

Modern developments are evident in the counties and the study area. Pipelines and transmission lines were laid within, and in the vicinity of, the study area by the mid-twentieth century (Figure 5-11). In 1971, construction began on Virginia's first nuclear energy plant on Hog Island (Apel and Watson 2006:27). In the early twenty-first century, Beaver Dam Airpark was opened in Area A of the study area. Despite changes, agriculture continues to be an economic mainstay in Isle of Wight and Surry counties with important crops being cotton, soy, and of course peanuts (Morrison and Gwaltney 2006). Within the study area, higher areas appear to have continued to be farmed while lower areas along swamps or pocosins appear to have been timbered (Figure 5-12).

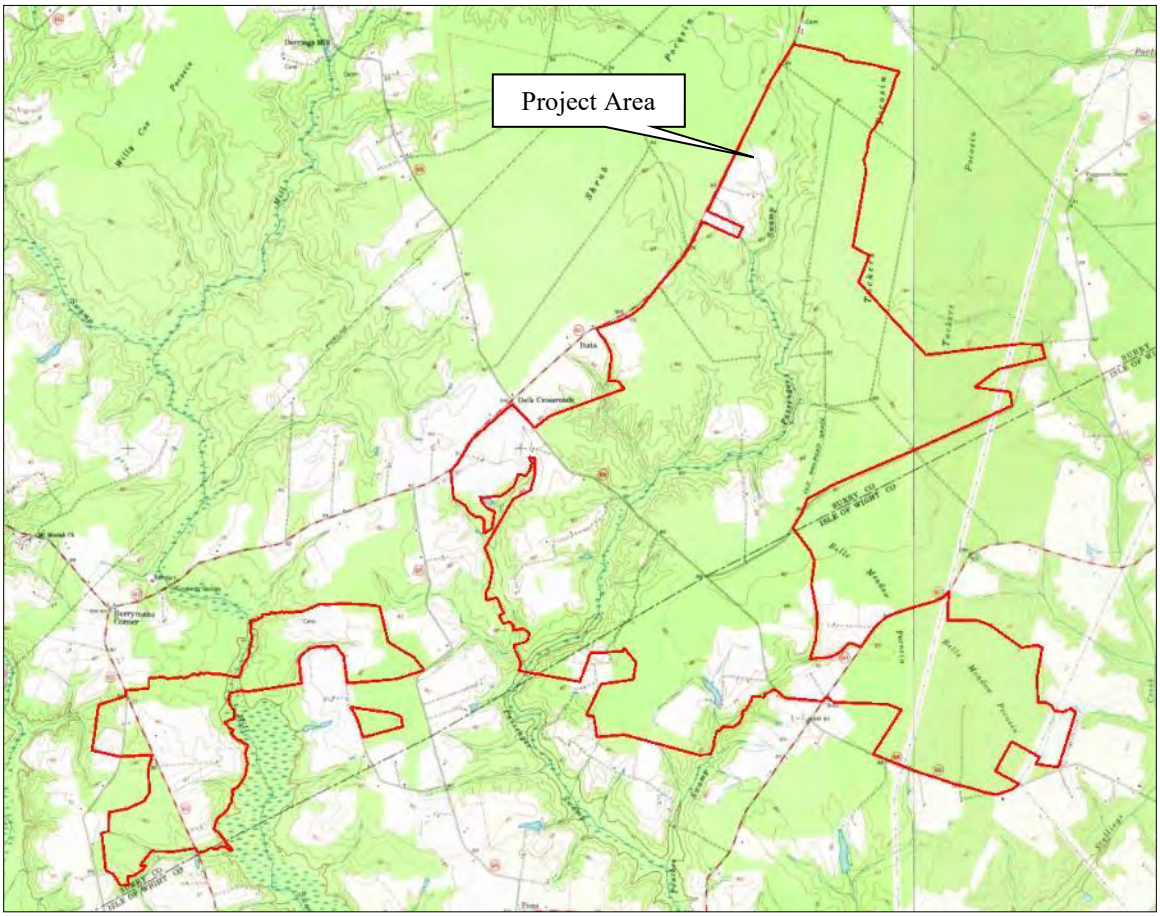

Figure 5-11: Detail of topographic maps, *Bacons Castle* (1969) and *Runnymede* (1968) depicting the study area. Source: USGS

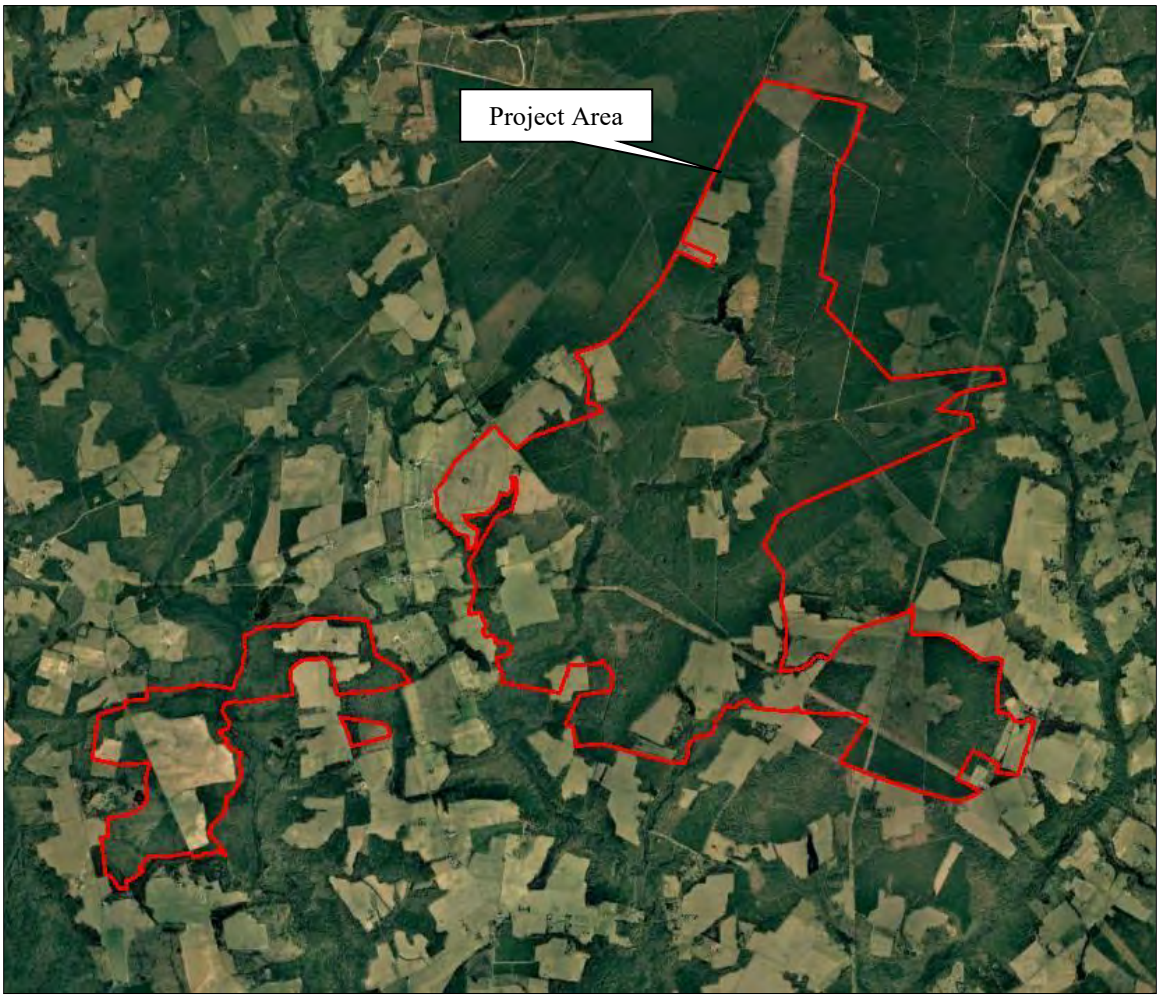

Figure 5-12: A 2007 aerial depicting the study area. Source: Google Earth

6. EXPECTED RESULTS

Before initiation of the Phase I survey, a Phase IA was performed to assess the environmental and cultural setting of the study area and to identify areas of high, medium, and low archaeological potential. This Phase IA included historical research, analysis of historic maps and aerials, and a pedestrian reconnaissance of the entire study area. Based on the results of the assessment, a probability model was developed that was approved by the Virginia Department of Environmental Quality (DEQ) and VDHR.

Analysis of historic maps from the early-twentieth century and the mid-nineteenth century showed a number of dwellings scattered across the study area. The area was sparsely occupied during the 1860s, but by the early twentieth century it supported a larger population than it does today. Four of these historically-mapped dwellings are still standing, and seven were archaeological sites identified during the assessment. In addition to the domestic sites, two cemeteries were identified in the field, and one potential cemetery was noted.

The study area is crossed by numerous swamps, drainages, and pocosins. These natural resources would have been attractive to prehistoric hunters and gatherers, but the terrain within the study was not likely to have supported large, permanent settlements. The primary prehistoric resources that are likely to be present are small, temporary procurement camps located above the wetlands.

Although the study area contains a number of site-predictive factors, such as the natural resources and the mapped dwellings and cemeteries, land use throughout the twentieth and twenty-first centuries has negatively impacted the stratigraphic integrity of the soils. Most of the study area has been used to grow and harvest pine trees for decades, with numerous episodes of clearcutting, planting, and regrowth. Most of the regrowth has been in the form of trees planted in steeply-banked rows interspersed with deep furrows, with the topsoil and eluviated layers being destroyed or displaced.

Based on the above observations, the locations of the archaeological sites that were observed in the field were considered high potential for historic sites, an area covering about 17 hectares (42 acres) total. The historically mapped locations of the structures that were not visible through surface reconnaissance were considered moderate potential for historic sites, an area covering about 102 hectares (252 acres) total. The remainder of the study area that does not lie in wetland was considered low potential for archaeological resources. A 25% sample of the moderate potential areas was subjected to targeted subsurface testing. This sample included the least disturbed landforms that correspond the best with the locations of the structures depicted on historic maps. Finally, a sample constituting 10% of the low-potential area was subjected to subsurface testing. This 10% included the least-disturbed terraces overlooking wetlands and intersections of streams to test for prehistoric resources; the edges of fields depicted on the 1863 map to test for early historic sites; and any other areas that appeared to be less disturbed in the field. The total low probability area is about 871 hectares (2,153 acres) (Figure 6-1 through 6-4).

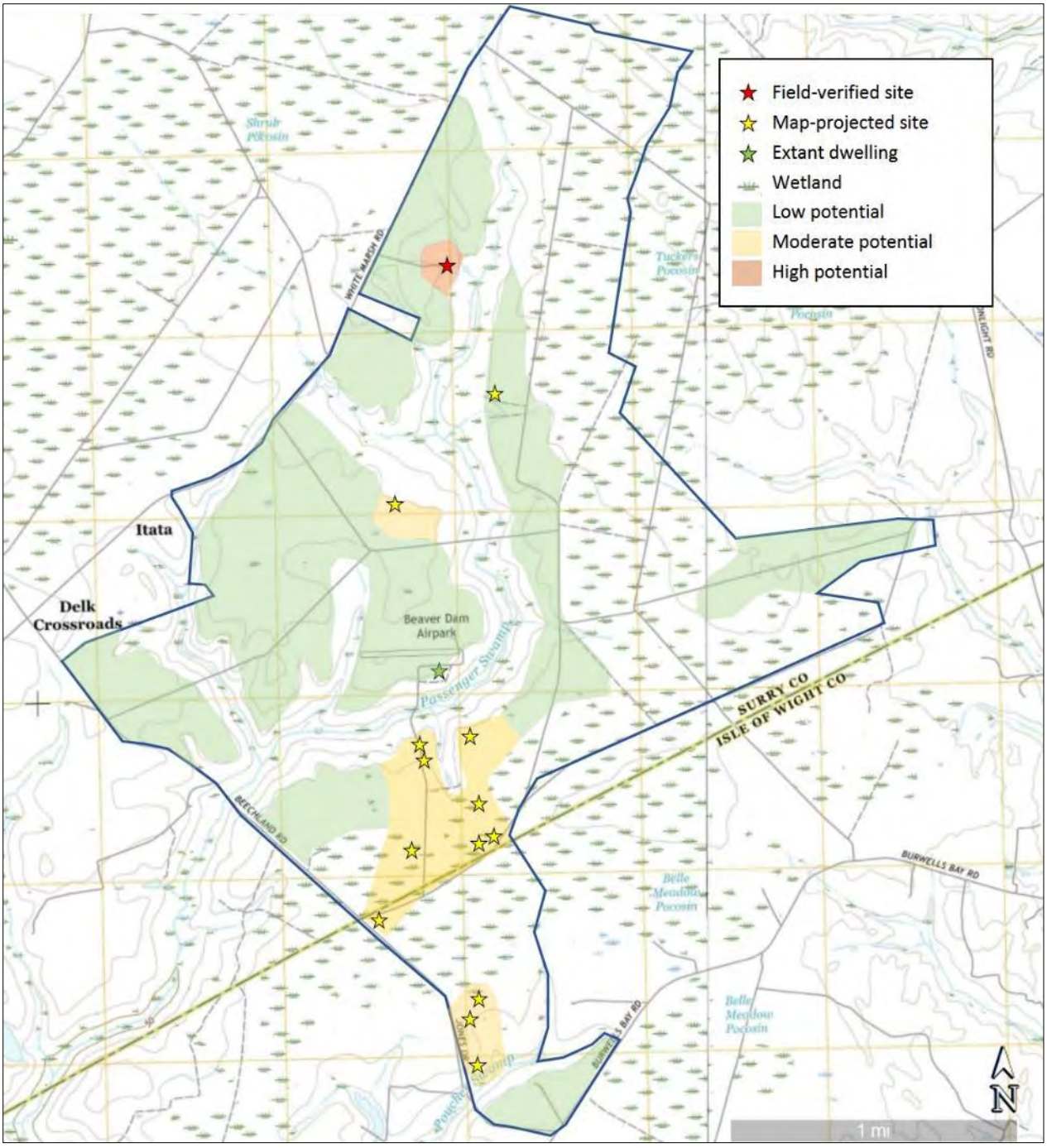

Figure 6-1: Site potential for Area A.

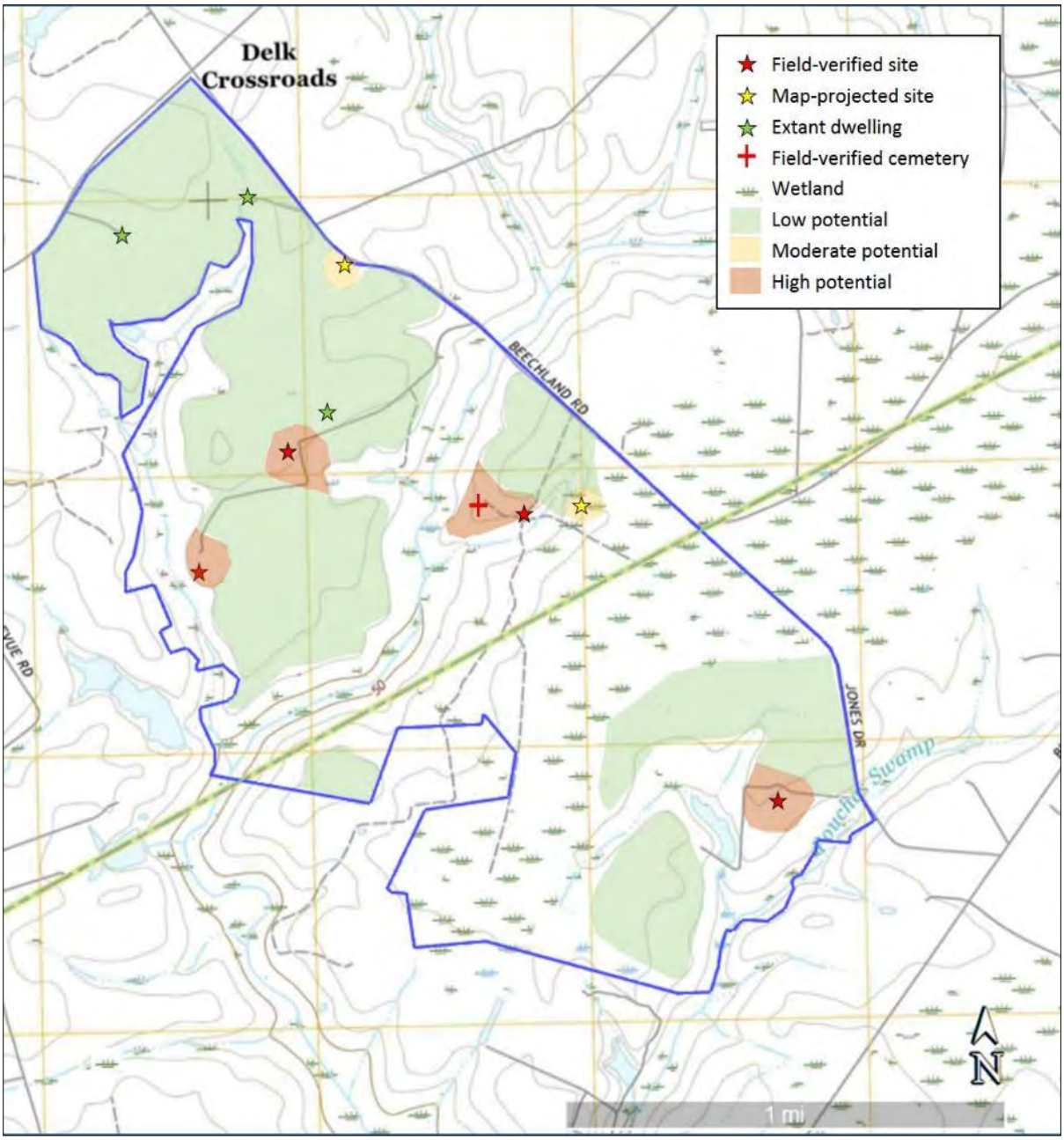

Figure 6-2: : Site potential for Area B.

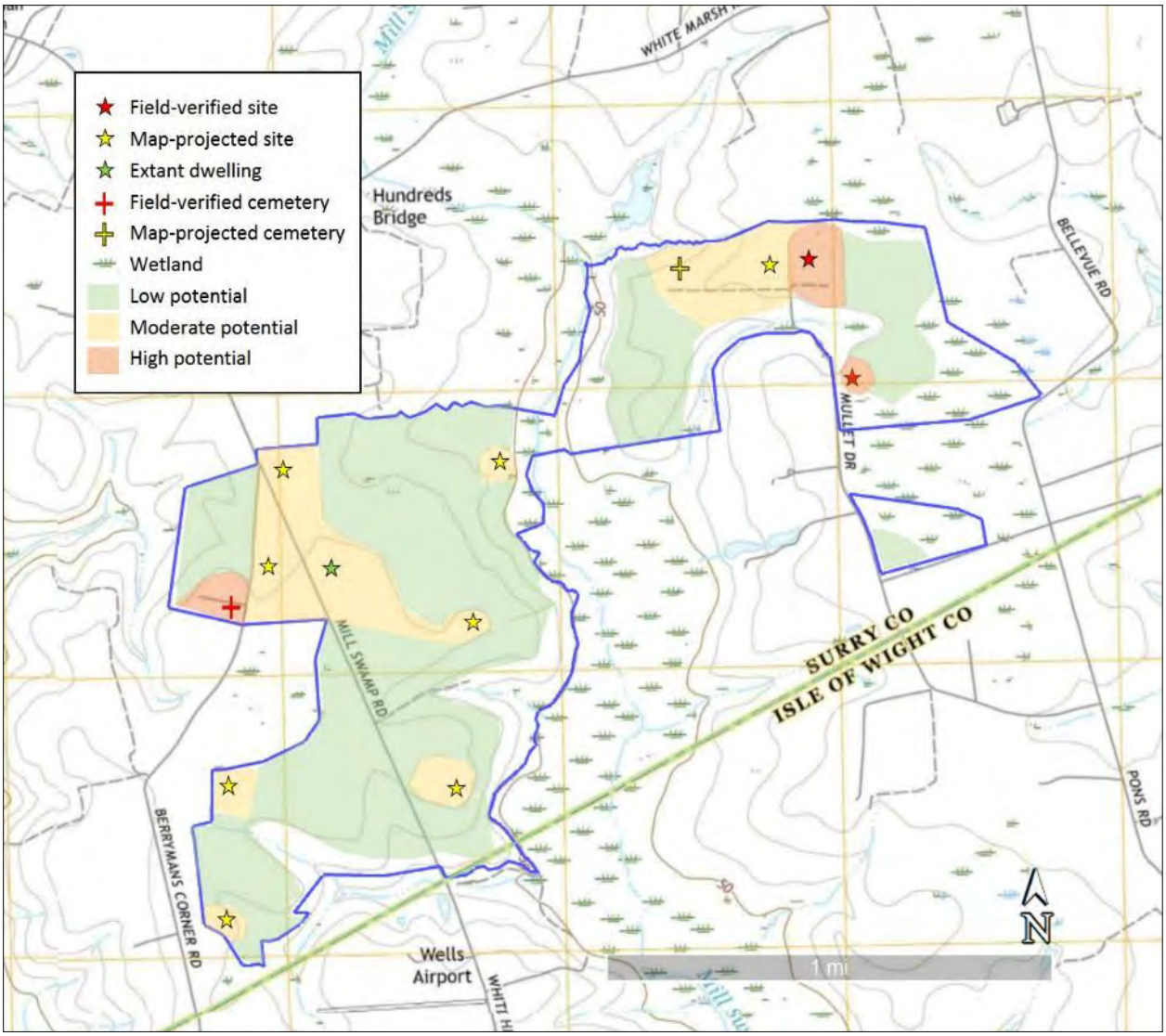

Figure 6-3: Site potential for Area C and D.

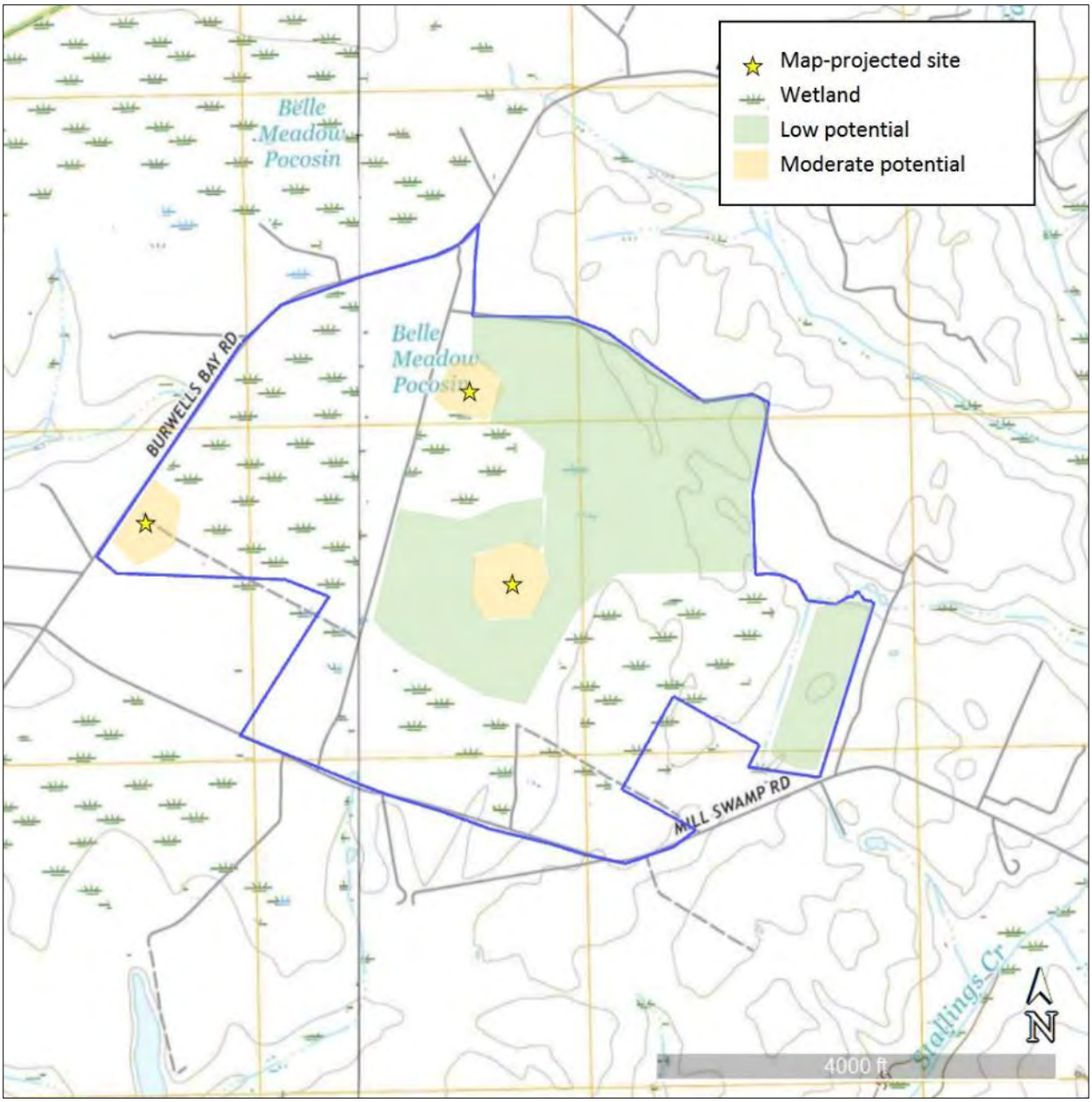

Figure 6-4: Site potential for Area E.

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7. FIELD SURVEY RESULTS

From February 12 through June 4, 2020, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey of the ±2,106.02-hectare (±5,204.1-acre) Cavalier Solar study area in Isle of Wight and Surry counties, Virginia. The effort included both architectural and archaeological survey. The archaeological survey was performed in accordance with a research design approved by DEQ and VDHR.

Each discrete group of parcels was given a letter designation and treated as a separate area. These areas were labeled A through E. Within these larger areas, individual grids of subsurface testing and systematic pedestrian survey were given sub-area designations (Figure 7-1).

The results of the architectural survey are detailed in a separate volume. The results of the archaeological survey are detailed by area, below.

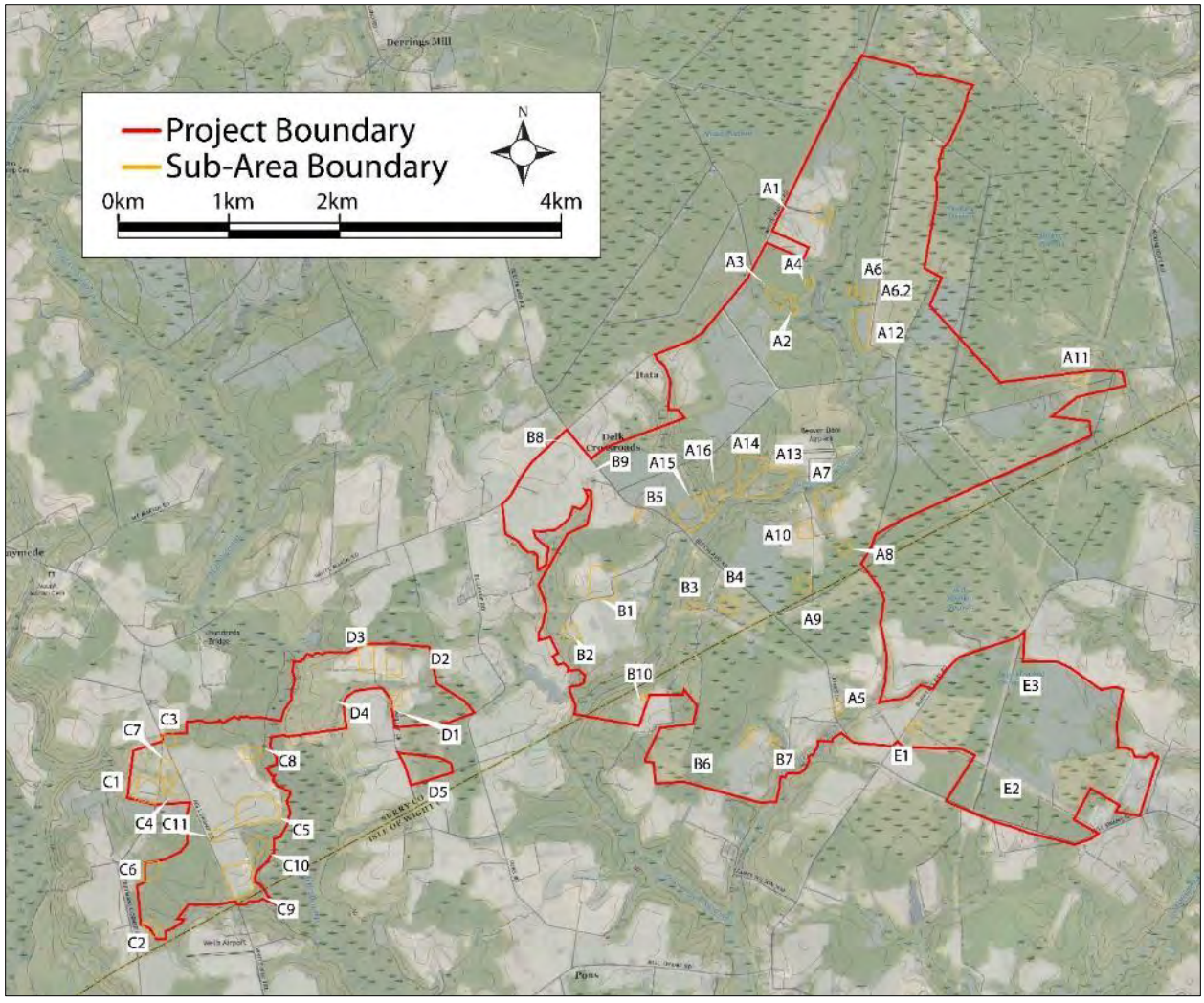


Figure 7-1: Overview of entire project area with areas.

AREA A

This is the largest collection of parcels in the project area; it measures approximately 1,077 hectares (2,660 acres) and is situated between White Marsh Road to the west and Beechland Road to the south. A network of farm roads connects the parcels to these roads. A small private airstrip, Beaver Dam Airpark, is located in the southern center of the property.

Almost half of Area A is mapped as wetland. Except for a few small islands of well-drained soil, all of the east side, most of the north side, and most of the south side of Area A is depicted as wetland on the 2016 USGS *Runnymede* and *Bacon's Castle* topographic quadrangles. Passenger Swamp runs north-south through the center of the area, and Tuckers Pocosin and Belle Meadow Pocosin sit on the north and east sides of Area A (Figure 7-2). Portions of the area that are not wetland are low-lying with little topography.

Figure 7-2: View north toward Passenger Swamp from south-center of project area.

Vegetation within Area A consists mostly of agricultural fields and stands of timber in various stages of harvest and regrowth. Detailed descriptions and photos of the landscape around each grid are given with each sub-area.

A total of 16 sub-areas were targeted for systematic subsurface testing or more intensive pedestrian reconnaissance (Figure 7-3). These sub-areas were labeled consecutively in the order they were surveyed. However, they are described below in groups according to location, moving clockwise across the property from north to south.

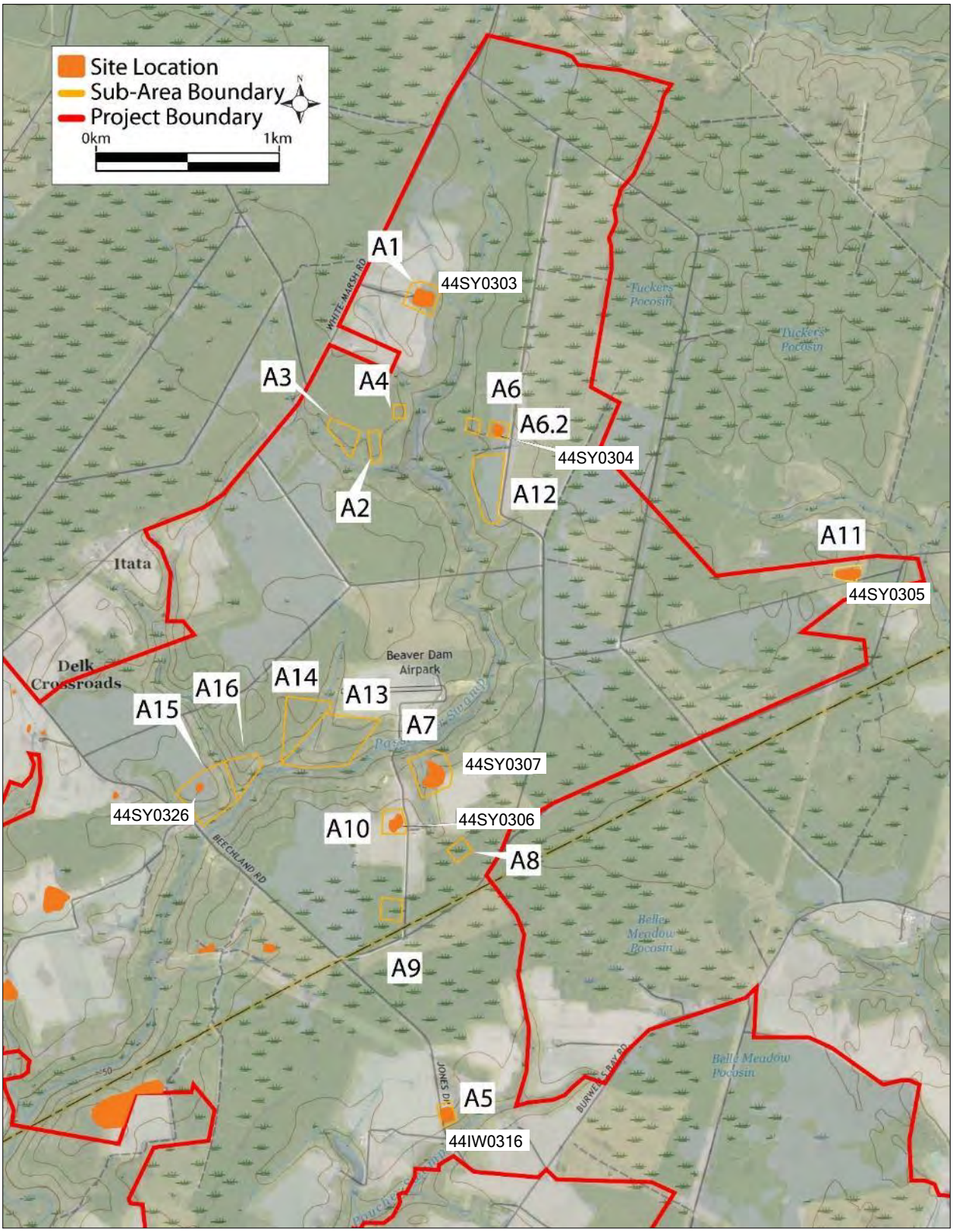


Figure 7-3: Detail view of Area A, showing sub-areas.

GRID A1

This grid was placed over a site identified during the Phase IA that corresponds with a structure depicted on the 1919 *Surry* USGS topographic map. Vegetation in this part of Area A consisted of a fallow agricultural field located on the east side of White Marsh Road (Figure 7-4). A driveway runs through the middle of this field out to a cluster of mature trees where the site is located. Dense wooded wetland is located directly east of the site. The site was designated Field Site 1, and it is described in detail, below.

Figure 7-4: View of field and vegetation on northwest side of grid, facing northeast.

A grid of 87 shovel test pits was laid out, 18 of which could not be excavated due to water-saturated soils and disturbance (Figure 7-5). A total of 11 shovel tests were positive with late-nineteenth through early-twentieth century material. These positives, plus the surface features, were designated 44SY0303, which is described in detail, below.

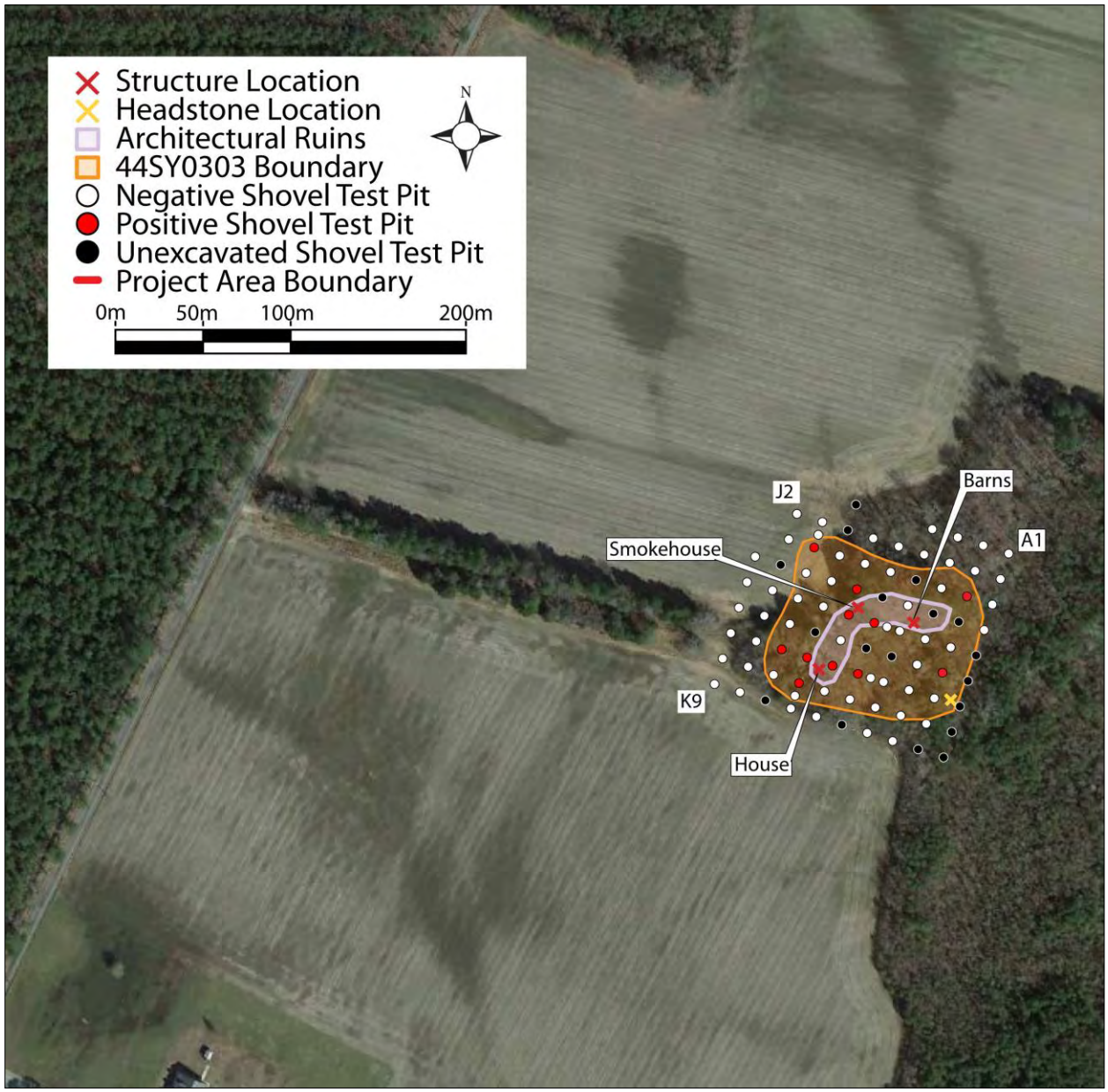
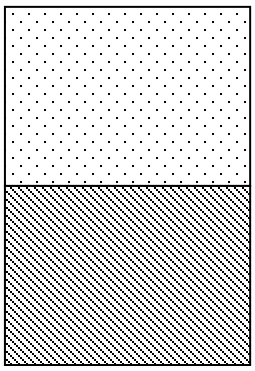


Figure 7-5: Aerial view of testing in Grid A1.

Soils consisted of 10YR 5/3 brown sandy loam topsoil (A horizon) over 10YR 6/4 light yellowish brown fine sandy clay subsoil (B horizon) (Figure 7-6).



10YR 5/3 sandy loam
0-23 cm

10YR 6/4 fine sandy clay
23-37 cm

Figure 7-6: Soil profile of Shovel Test J6, typical of Grid A1.

44SY0303

This site consists of a group of ruined structures located within a wooded area in Area A1. These ruins correspond with a dwelling labeled “Wilson” on the 1863 map and a dwelling depicted on the 1919 map. The setting remains much as it did on the 1919 topographic map, with a driveway leading through an agricultural field from White Marsh Road to a complex of buildings at the edge of a wooded wetland.

Vegetation around the site consisted of mature cedar and oak with an understory of briars and vines. Ornamental plants were scattered around the area, including privet, yucca, tulips, and daffodils. Structural remains consisted of collapsed sheds, a small collapsing structure with a chimney, and a tall standing chimney associated with the main dwelling (Figure 7-7 through 7-10).

Figure 7-7: Collapsed shed, facing west.

Figure 7-8: Barn, facing west.

Figure 7-9: Small dwelling, facing west.

Figure 7-10: Standing chimney from main dwelling, facing east.

A single fallen headstone was noted on the east side of the site at the edge of the wetland. It memorializes Diana Southall Carroll (1872-1887) (Figure 7-11). No other depressions or headstones were noted. This cemetery is recorded in the Architecture volume of this report.

Figure 7-11: Headstone for Diana Carroll

A total of 53 artifacts were recovered from 11 shovel tests (Figure 7-12). These materials date from the late-nineteenth through early-twentieth century and include: window glass (N=20); brick fragments (N=3); plaster fragments (N=5); a fragment of coal; iron hardware fragments (N=15); oyster shell (N=2); colorless vessel glass (N=3); and a sherd each of whiteware, ironstone, and Albany slip stoneware.

Surface artifacts and architectural material suggested occupation through the mid-twentieth century. Modern materials within the structure included copper plumbing, and materials noted on the ground included discarded shoes and plastic trash.

Figure 7-12: Representative artifacts recovered from 44SY0303.

This farmstead appears to have been occupied from the 1860s through the 1960s. It is in ruined condition and does not possess integrity as an architectural resource. Due to the later additions and the late-twentieth century material, archaeological evidence from earlier occupation is likely to have been destroyed. Therefore, this site possesses little potential to provide new or significant archaeological data, and it is recommended not eligible for inclusion in the NRHP. The area around the headstone should either be avoided with a 100-foot buffer or should be delineated to determine the extent of any additional grave features.

GRIDS A2, A3, A4

These grids are located on the ends of several terraces overlooking the confluence of two streams within Passenger Swamp. A grid was placed on each of three fingers. Vegetation consisted of mature naturally-regenerated pine forest that has not been thinned (Figure 7-13; 7-14). All of the landforms are affected to some degree by logging disturbance.

Figure 7-13: Vegetation and terrain in Area A3, facing east.

Figure 7-14: View on end of terrace overlooking swamp in Grid A4, facing east.

A combined total of 89 shovel tests were excavated in these three grids (Figure 7-15). Only two shovel tests in Grid A3 contained cultural material. Three fragments of prehistoric pottery were recovered from these shovel tests. Due to the lack of additional material or features, these artifacts are interpreted as the result of loss or casual discard and are defined as a location rather than a site. No other material was recovered from the remaining shovel tests.

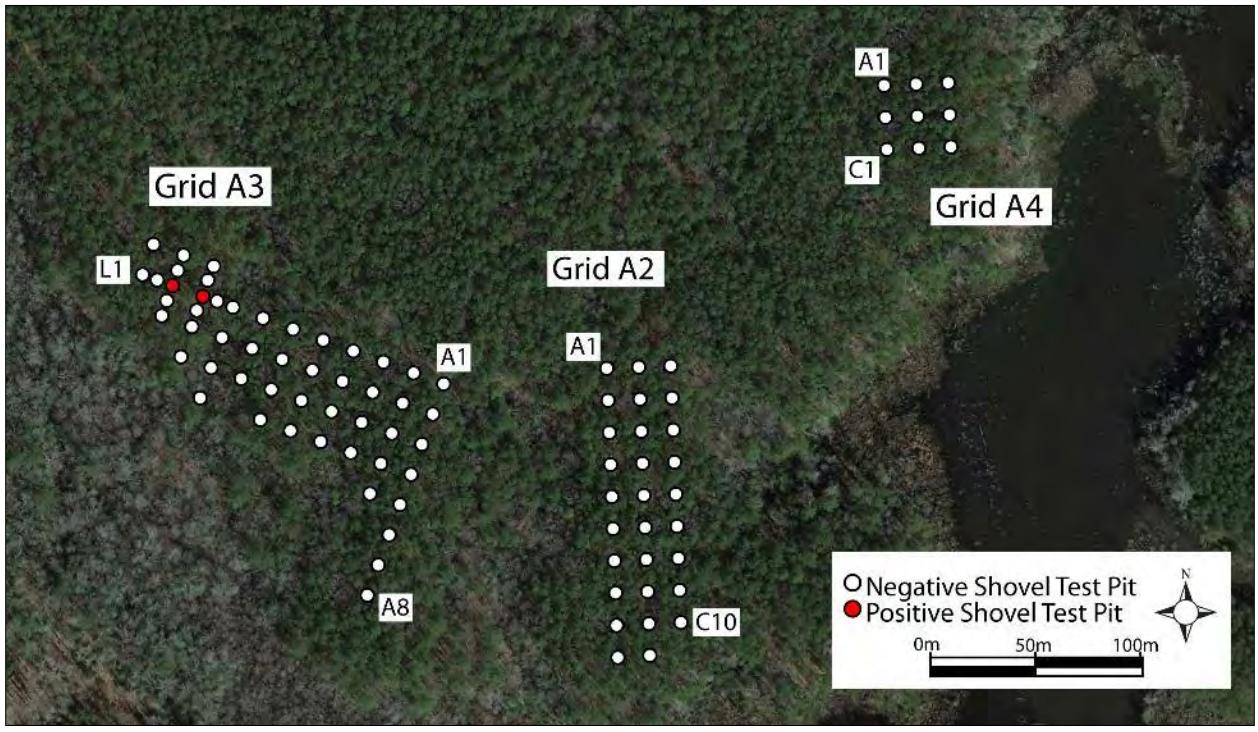


Figure 7-15: Aerial view of testing in Grids A2 through A4.

Soils were relatively undisturbed and exhibited a three-stratum profile typical of southern temperate forests, with a 10YR 5/3 brown sandy loam topsoil (A horizon) over an eluvial layer (E horizon) of 10YR 6/4 light yellowish brown silty sand over 10YR 6/4 brownish yellow sandy clay subsoil (B horizon) (Figure 7-16).

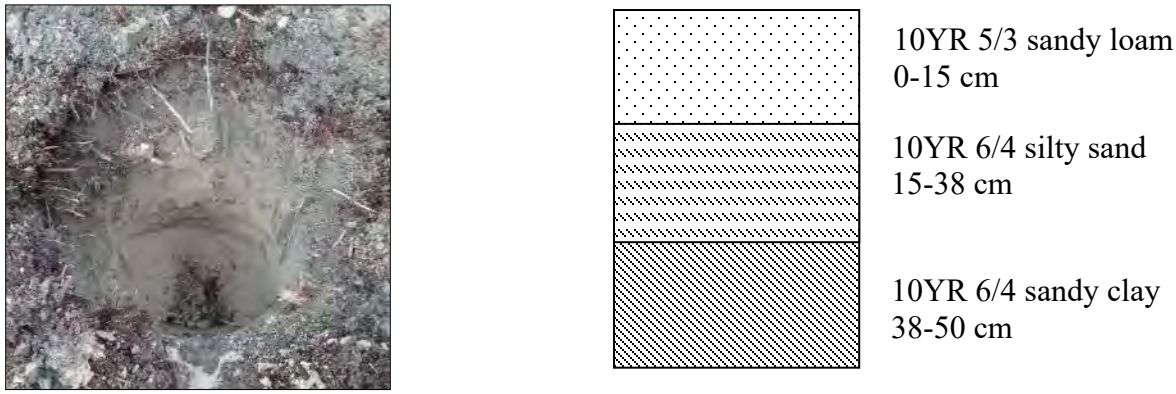


Figure 7-16: Soil profile of Shovel Test C3 in Grid A3.

GRID A6 AND A6.2

These grids were placed on the east side of Passenger Swamp, directly across from Grids A2 through A4. This was the projected location of a structure depicted on the 1919 map, and the terraces overlooking Passenger Swamp also showed some potential for prehistoric sites. Vegetation was the same as on the west side of the swamp, although the ground was more saturated in this area, and standing water was noted throughout.

No cultural material or features were noted in Grid A6, but yucca was noted near the edge of Tucker's Pocosin, so a second grid, labeled Grid A6.2, was placed to the east of Grid A6 (Figure 7-17). Vegetation around this grid consisted of mature pines planted in rows, and the degree of disturbance was greater in this area due to the more intensive timber management.

Figure 7-17: Overview of yucca growing between timber rows in Grid A6.2, facing south.

A combined total of 43 shovel tests was excavated in these two grids, two of which could not be excavated (Figure 7-18). Eight of the shovel tests in Grid A6.2 contained cultural material. This cluster of positives was designated 44SY0304 and is described in detail below.

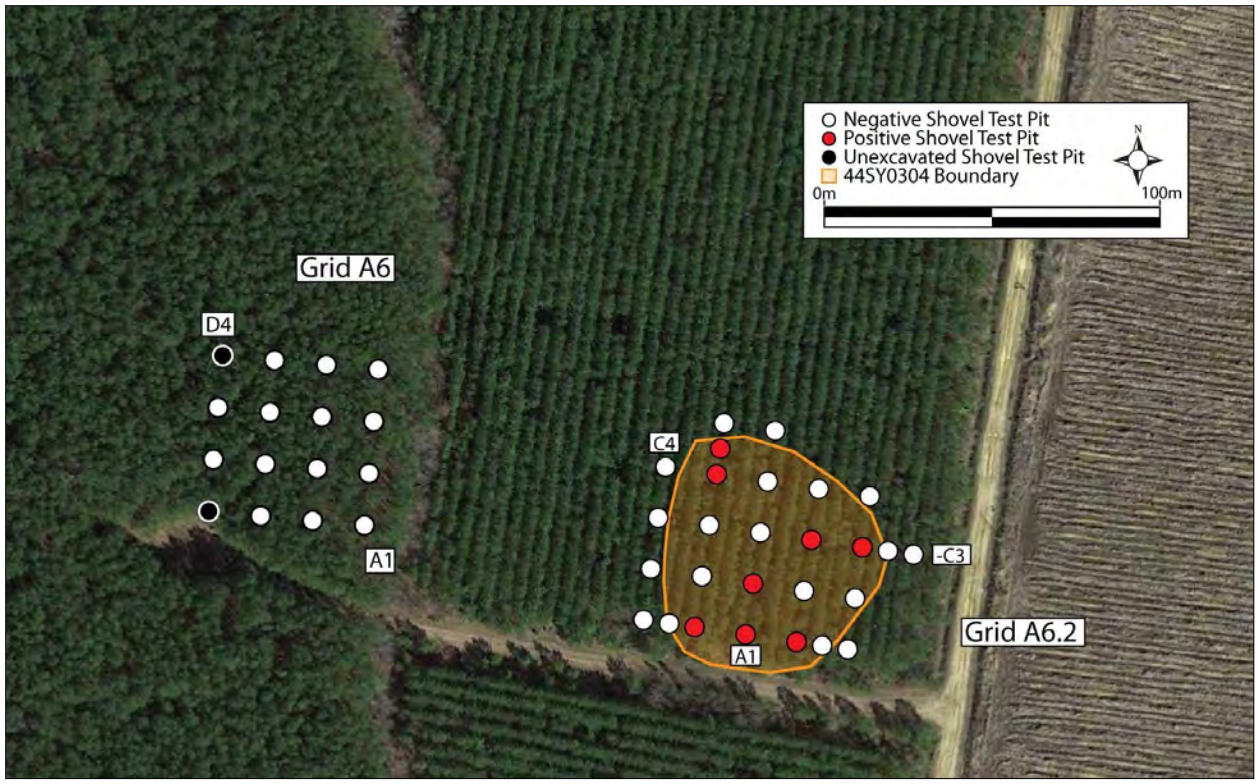
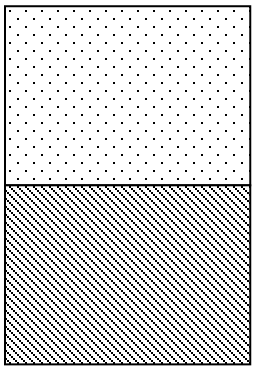


Figure 7-18: Aerial view of shovel tests in Grids A6 and A6.2.

Soils in Grid A6 were the same as in Grids A2 through A3. Soils in Grid A6.2 were more disturbed, consisting of a layer of 10YR 5/3 brown disturbed topsoil (A horizon) over a cut subsoil (B horizon) consisting of 10YR 6/4 light yellowish brown fine sandy clay subsoil (Figure 7-19).



10YR 5/3 sandy loam
0-25 cm

10YR 6/4 fine sandy clay
25-36 cm

Figure 7-19: Soil profile of Shovel Test B4.

44SY0304

This site consists of a cluster of positive shovel tests. Volunteer yucca plants were observed growing between rows; they had likely been propagated or displaced from ornamental plants originally planted around a dwelling. No other evidence of a dwelling was observed, and the disturbance from planting the trees appears to have more or less destroyed the site.

A total of 12 artifacts were recovered, including nails (N=2, both cut and unidentifiable), iron fragments (N=4), a fragment of brick, a sherd of ironstone, and a sherd of whiteware (Figure 7-20).

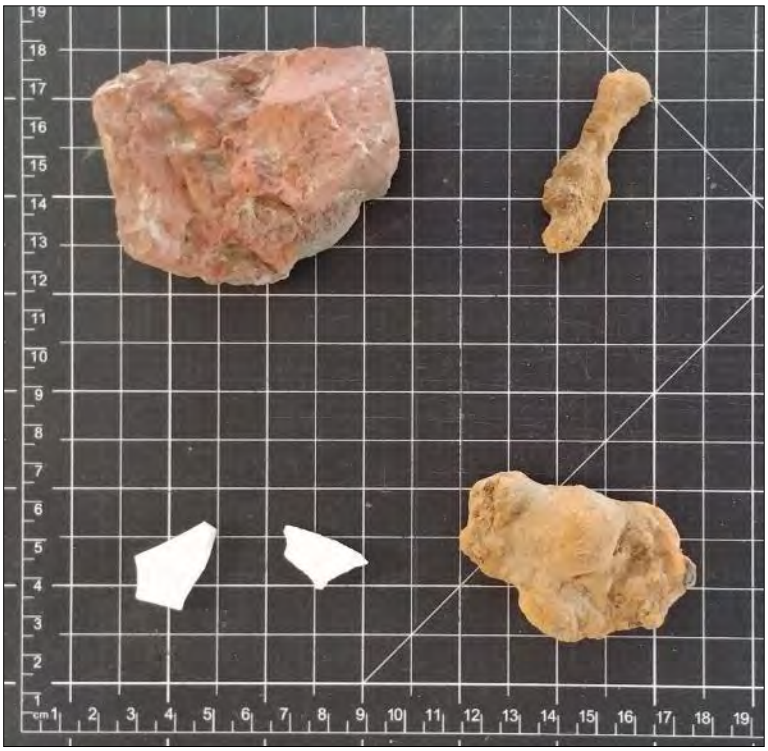


Figure 7-20: Representative artifacts recovered from 44SY0304.

Due to its extensive disturbance, the small number of artifacts, and its late date, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

AREA A12

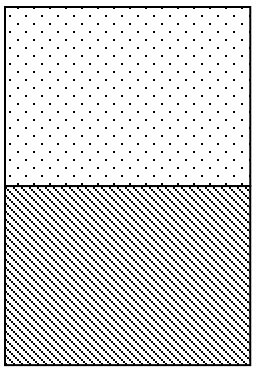
This area was initially targeted for systematic subsurface testing based on its location on a section of high ground between Passenger Swamp and Tuckers Pocosin being a predictive factor for prehistoric sites. However, conditions on the ground indicated that no intact archaeological deposits are likely to have survived. Vegetation in this area consisted of young pines planted in bedded rows, with deep furrows between each row (Figure 7-21).

Figure 7-21: Pines planted in deeply bedded rows in Area A12, facing south.

A total of four judgmental shovel tests were excavated across the area to confirm the level of disturbance (Figure 7-22).

Figure 7-22: Aerial view of subsurface testing in Area A12.

These judgmentals revealed a disturbed profile with A and E horizons mixed together and a jagged, uneven transition to subsoil. A typical profile consisted of 10YR 5/3 brown mottled with 10YR 6/4 light yellowish brown sandy loam topsoil (A horizon) over 10YR 6/4 light yellowish brown fine sandy clay subsoil (B horizon) (Figure 7-23).



10YR 5/3 m/w 10YR 6/4
sandy loam
0-25 cm

10YR 6/4 fine sandy
clay
25-38 cm

Figure 7-23: Soil profile of Judgmental 3.

GRID A11

This grid was intended to be placed on the easternmost corner of the project area on a small section of higher ground between Stallings Creek and Tuckers Pocosin. This area was considered low potential for archaeological resources. Conditions on the ground showed that any potential for intact sites had been destroyed by timber management activities.

The trees had been harvested shortly before fieldwork began, and based on the rows and deep furrows, it appears that this had been a stand of planted pines. The ground had been further disturbed by logging, and the area was covered in slash and standing water (Figure 7-24).

Figure 7-24: Overview of Area A11, facing east.

The area was walked to look for features or cultural material. Due to the extensive disturbance, no subsurface testing was conducted. A scatter of surface artifacts was noted and designated 44SY0305 (Figure 7-25). This site is described in detail, below.

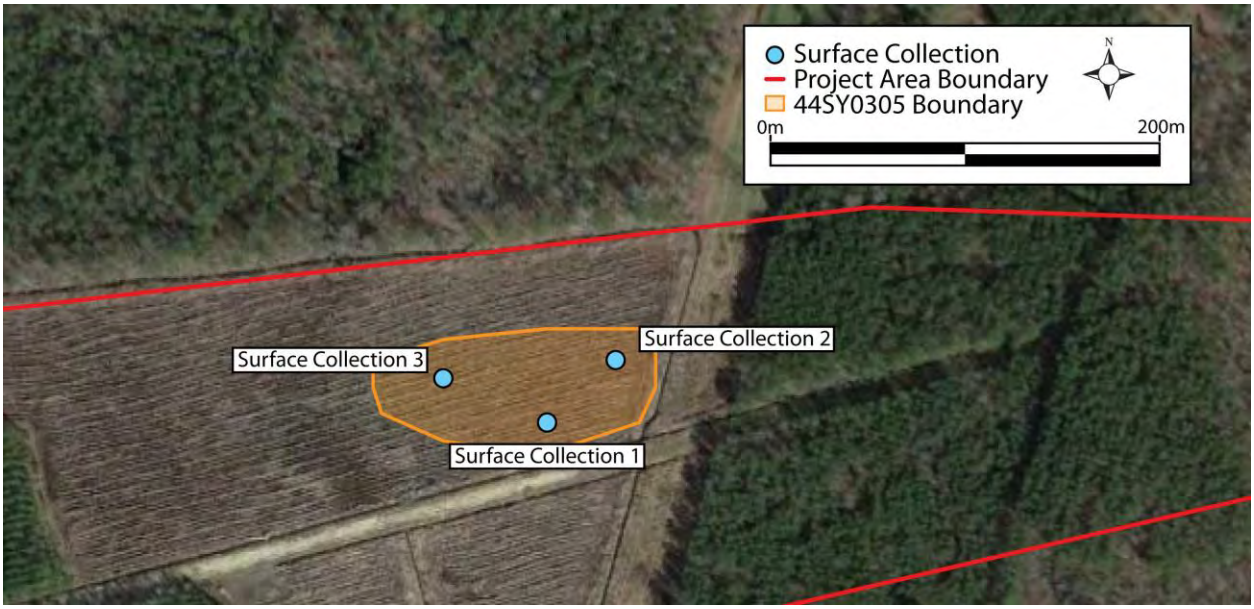


Figure 7-25: Aerial view of Area A11.

44SY0305

This site consists of a scatter of late-nineteenth through early-twentieth century artifacts observed on the surface of a recently clearcut area. The scatter measured approximately 30 meters by 15 meters. Only a sample of the artifacts were collected, including whiteware, ironstone, window glass, and the body of a pharmaceutical bottle labeled "TAYLOR DRUG, RICHMOND VA" that could be dated from 1890 to at least 1931 (Figure 7-26).

Figure 7-26: Representative artifacts recovered from 44SY0305.

Due to its heavy disturbance and the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

GRID A5

This grid is located in an agricultural field in the far southeast corner of the project area, right off of Beechland Road. Several structures are depicted on the 1919 USGS map in this location, indicating a high potential for archaeological resources. Vegetation at the time of survey consisted of young winter wheat (Figure 7-27).

Figure 7-27: Agricultural field, facing north.

A total of 23 shovel tests was excavated in Grid A5, 14 of which were positive with late-nineteenth through early-twentieth century cultural material (Figure 7-28). This cluster of positives was designated 44IW0316 and is described in detail below.

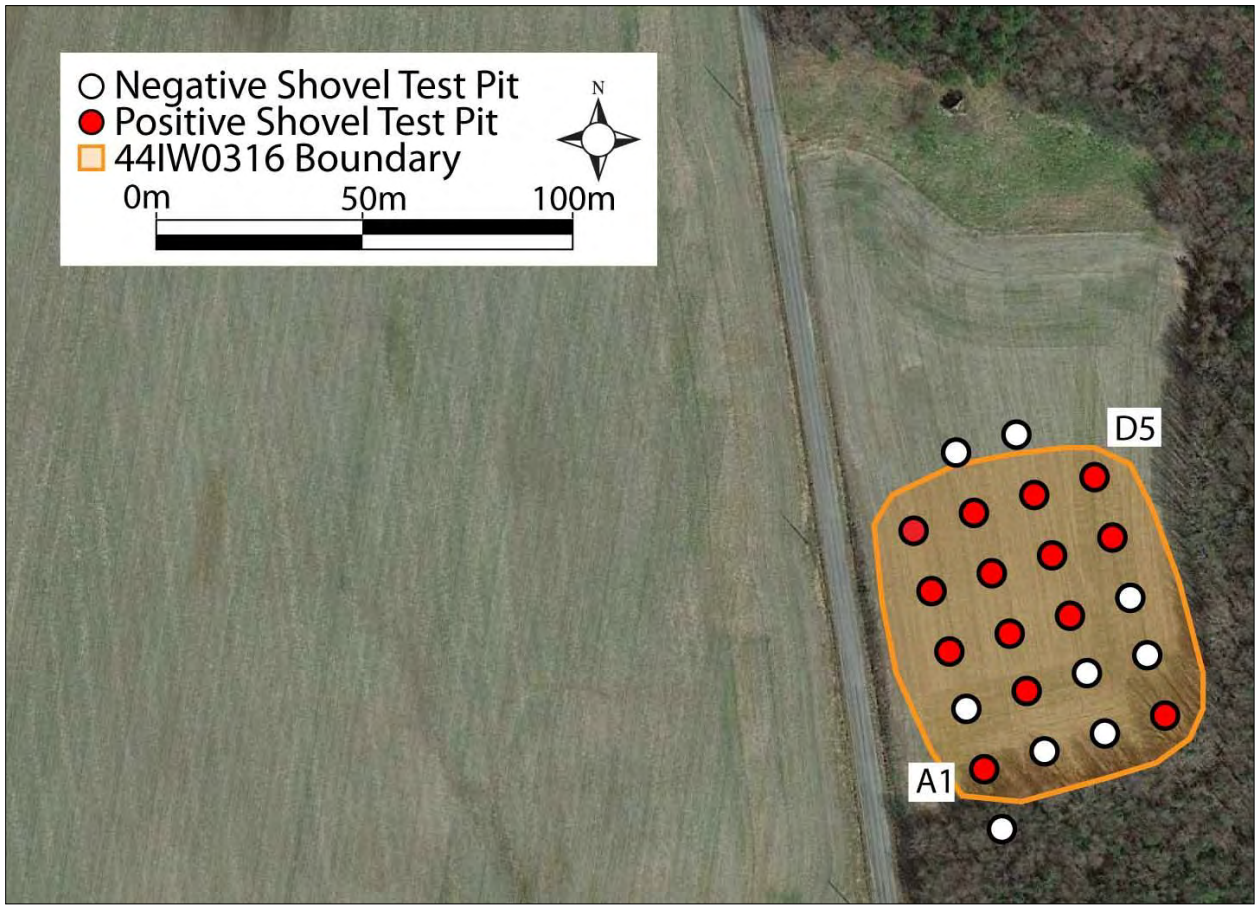
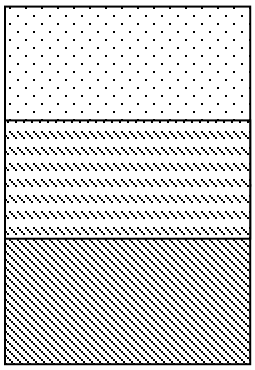


Figure 7-28: Aerial view of subsurface testing in Area A5.

As in the wooded sections, soils in this area consisted of three layers: a 10YR 5/3 sandy loam A horizon over a 10YR 6/4 silty sand E horizon over a 10YR 6/4 B horizon (Figure 7-29). The lack of a clearly defined plowzone suggests that this field has only been in use for crops after modern no-till planting methods came into widespread practice.



10YR 5/3 sandy loam
0-16 cm

10YR 6/4 silty sand
15-37 cm

10YR 6/4 sandy clay
37-48 cm

Figure 7-29: Soil profile of Shovel Test B1.

44IW0316

This site consists of a scatter of late-nineteenth through early-twentieth century artifacts (Figure 7-30). A total of 39 artifacts were recovered. These materials consisted of a few brick and mortar fragments; a fragment of oyster shell; a machine cut nail, iron fragments (N=3); vessel glass (N=15), including solarized, light blue, aqua, cobalt, and colorless types; window glass (N=8); a milk glass lid liner, ironstone (N=3), Bristol glazed stoneware (N=1); a fragment of a bisque figurine; and a Prosser button. One quartzite flake was also recovered.

Figure 7-30: Representative artifacts recovered from 44IW0316.

Due to its late date and the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

GRIDS A8 AND A9

These two grids were placed in the projected locations of structures depicted on the 1919 map. These areas are currently depicted as wetland on the 2016 topographic map, but small grids were placed over the projected locations of structures to ensure that all archaeological sites were identified. Grid A8 is located to the east of a farm road that leads off of Beechland Road, and Grid A9 is located directly west of this farm road. Both grids are set in mature pine forest with a dense undergrowth of hardwood saplings and hollies (Figure 7-31).

Figure 7-31: Vegetation in Grid A8, facing south.

A grid of 23 shovel tests was laid out in A8, four of which contained cultural material (Figure 7-32). They consisted of a sherd of whiteware, a fragment of colorless vessel glass, and two fragments of brick. Due to the paucity of material, this small concentration of artifacts was designated a location rather than a site.

A grid of 36 shovel tests was laid out in A9, none of which contained cultural material (Figure 7-33).

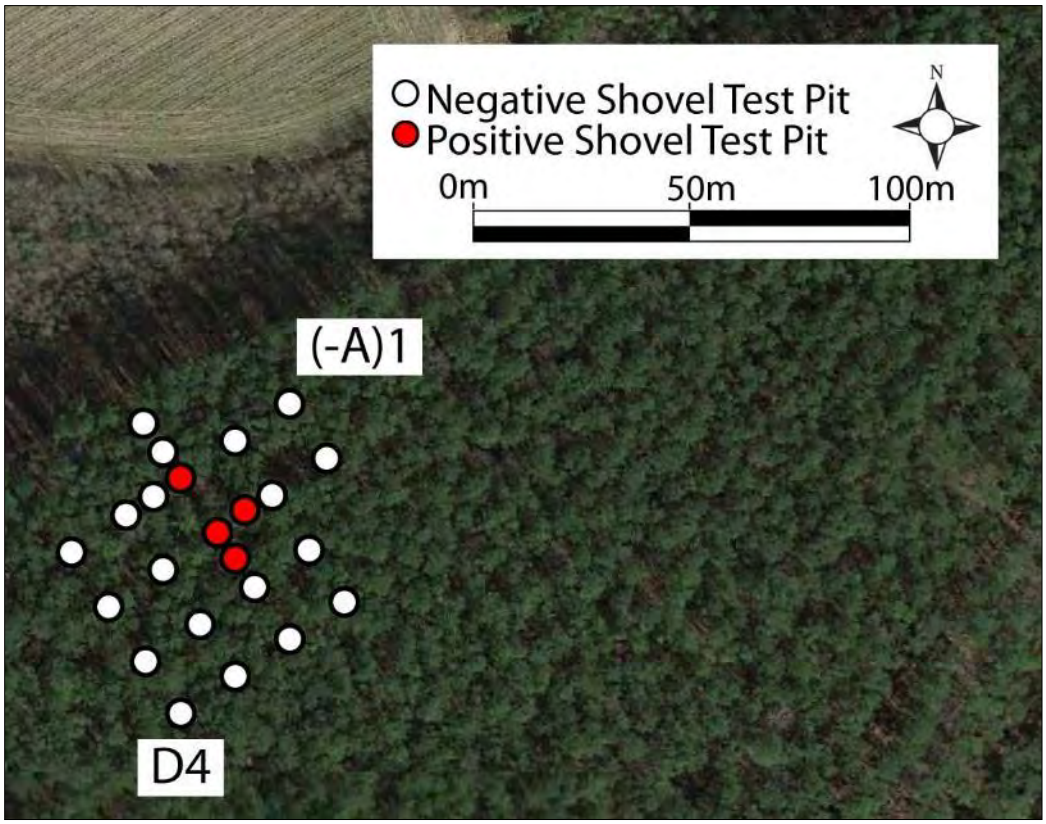


Figure 7-32: Aerial View of Grid A8.

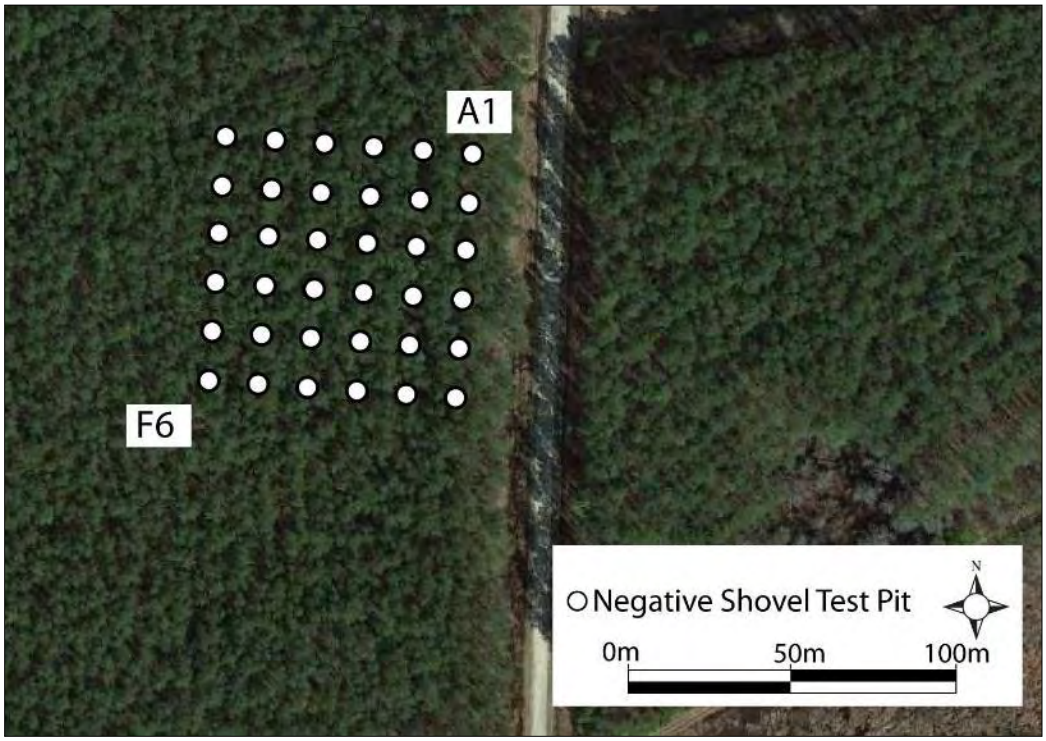


Figure 7-33: Aerial view of Grid A9.

Soils in both grids were disturbed and poorly drained. Grid A8 was somewhat drier, but the soils still exhibited hydric characteristics. Soils in Grid A9 were very poorly drained, and many of the shovel tests filled with water during excavation.

Soils were hydric and disturbed in both grids. A typical shovel test in Grid A8 consisted of a layer of disturbed 2.5Y 6/3 light brownish gray silty loam disturbed topsoil (A horizon) with a mottled, uneven transition to 2.5Y 6/4 light yellowish brown subsoil (B horizon) (Figure 7-34). Many of the shovel tests in Grid A9 filled with water before subsoil was reached (Figure 7-35).

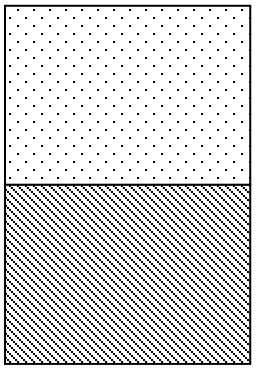


Figure 7-34: Soil profile of Shovel Test B1, typical of soils in Grid A8.

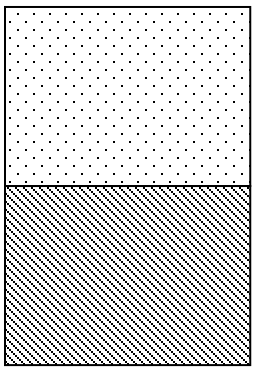


Figure 7-35: Soil profile of Shovel Test E2 in A9, which filled with water at 21 cm.

GRID A10

This grid was located in the projected location of a structure from the 1919 USGS map. Vegetation within this area consisted of a fallow field located between Passenger Swamp and Belle Meadow Pocosin (Figure 7-36). The grid was placed on the west side of a gravel farm road that leads from Beechland Road to a dwelling and farm buildings.

Figure 7-36: Overview of location of Grid A10, facing west.

A grid of 41 shovel tests was placed in this area, one of which fell in a farm road and could not be excavated (Figure 7-37). A concentration of 11 positive shovel tests was designated 44SY0306; it is described in detail below.

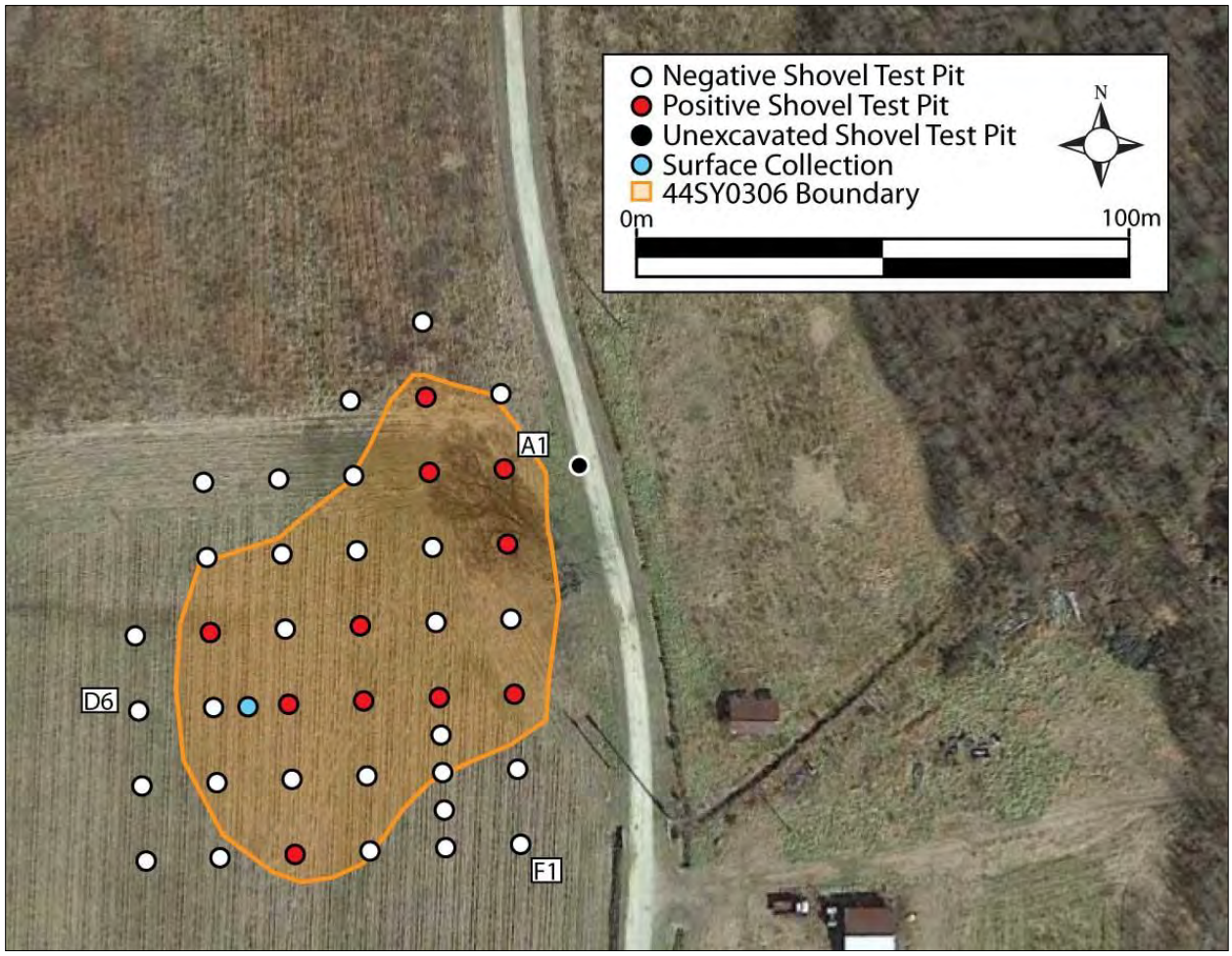
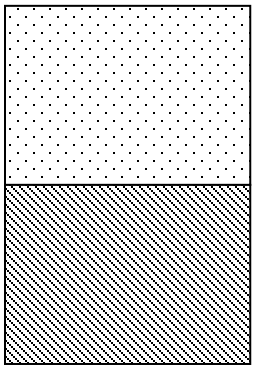


Figure 7-37: Aerial view of Grid A10.

Soils in this grid consisted of 10YR 4/3 brown sandy loam plowzone (Ap horizon) over 2.5Y 5/4 light olive brown sandy clay subsoil (B horizon) (Figure 7-38).



10YR 4/3 sandy loam
0-30 cm

2.5Y 5/4 sandy clay
30-43 cm

Figure 7-38: Soil profile of Shovel Test D2.

44SY0306

This site consists of a diffuse scatter of early-twentieth century domestic artifacts, mostly brick fragments. One fragment each of colorless, light blue, and solarized vessel glass was recovered, plus an unidentifiable nail and a sherd of Bristol-glazed stoneware with Albany slip (Figure 7-39).

Figure 7-39: Representative artifacts recovered from 44SY0306.

Due to the diffuse nature of the archaeological deposits and the late date of the site, Field Site 5 has little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

GRID A7

This grid was placed on the northern edge of an agricultural field on the east side of the gravel farm road across from Grid A10 (Figure 7-40). This was another projected location of a structure depicted on the 1919 topographic map. Vegetation consisted of fallow field on the south side of the grid and young hardwoods on the north side of the grid, which overlooked Passenger Swamp.

Figure 7-40: Overview of location of Grid A7, looking west toward site from field.

The grid consisted of 90 shovel test pits was laid out over edge of the field and into the woods, three of which could not be excavated due to disturbance (Figure 7-41). Of this total, 23 contained cultural material. This concentration was designated 44SY0307, and it is described in detail below.

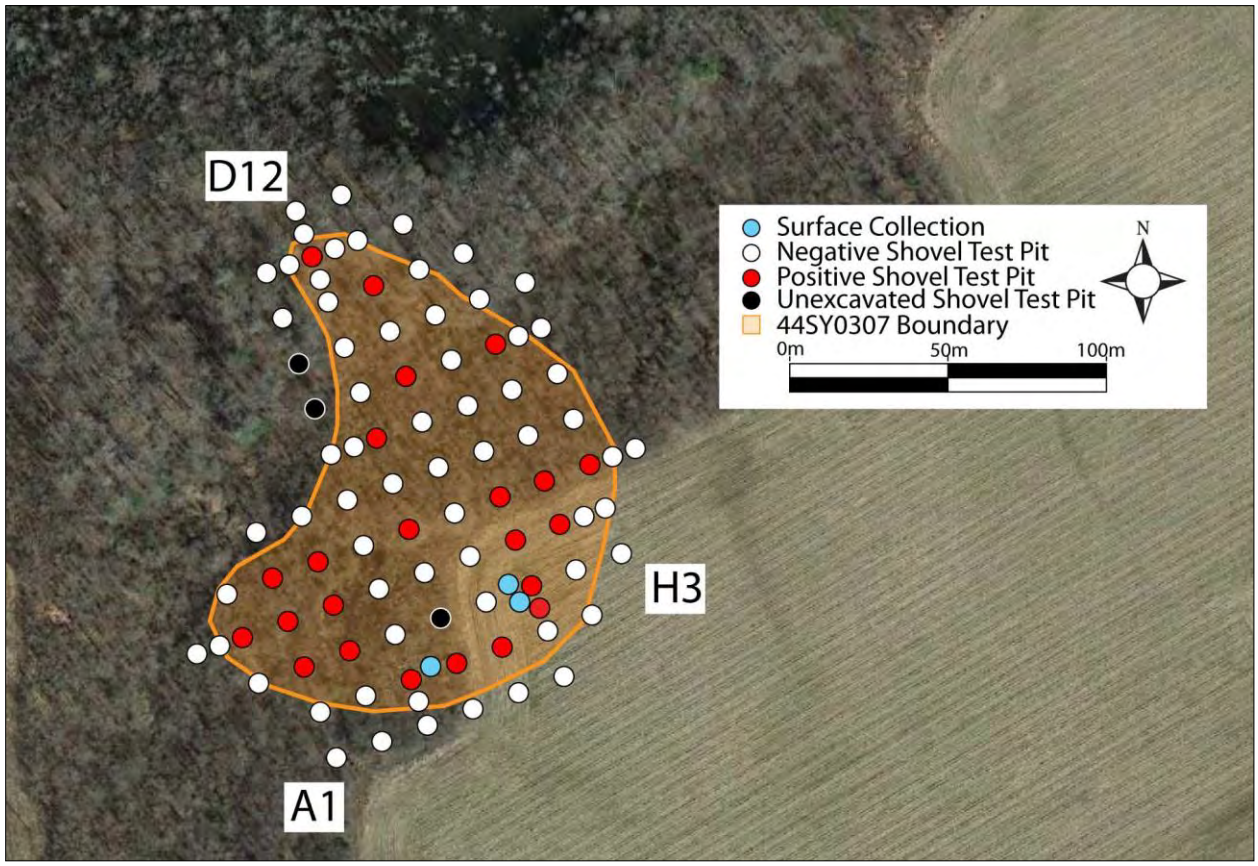


Figure 7-41: Aerial view of subsurface testing in Grid A7.

Soils consisted of a layer of 10YR 4/3 brown sandy loam plowzone (Ap horizon) over 2.5Y 5/4 light olive brown subsoil (Figure 7-42).

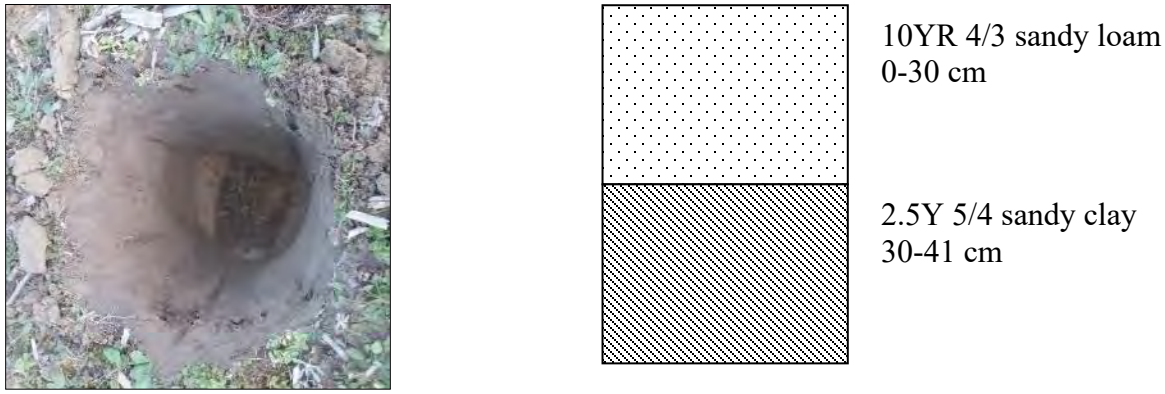


Figure 7-42: Soil profile of Shovel Test G2 in open portion of grid.

44SY0307

This is a late-nineteenth or early-twentieth century site with a small prehistoric component. Historic artifacts consisted of: brick fragments (N=38); nails (N=12, type unidentifiable); iron fragments (N=6); window glass (N=1); vessel glass (N=8), including amber, colorless, solarized, and dark purple types; ironstone ceramic (N=2); Bristol glazed stoneware with Albany slip (N=1);

porcelain (N=1); and a toy marble. Prehistoric materials consisted of lithic debitage (N=3) and a broken triangular projectile point (Figure 7-43).

Figure 7-43: Representative artifacts recovered from 44SY0307.

The remains of a frame structure were also noted in Field Site 6 within the wooded portion. These remains consisted of a collapsed roof with sheet metal roofing. Most of this was covered in leaves and fallen branches, and it was difficult to determine whether the materials were associated with a dwelling or outbuilding (Figure 7-44).

Due to the small quantity of late-dating artifacts that were recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Figure 7-44: Ruins of frame structure at Field Site 6, facing northeast.

GRIDS A13 AND A14

These two grids were placed together on a terrace formed at the confluence of an intermittent stream and Passenger Swamp. This location possessed some potential for prehistoric sites. Vegetation around Grid A13 at the time of survey consisted of young mixed deciduous and pine forest, and ground disturbance indicated that the area had been logged in the past. The terrace is crosscut by small, low draws that are too small to be mapped on a 7.5" topo. Vegetation around Grid A14 consisted of more mature planted pines with an understory of deciduous saplings (Figure 7-45; 7-46).

Figure 7-45: Vegetation and terrain in Grid A13, facing north.

Figure 7-46: Vegetation and logging disturbance in Grid A14, facing southeast.

A total of 251 shovel tests were excavated between the two grids, 31 of which were skipped due to logging disturbance (Figure 7-47).

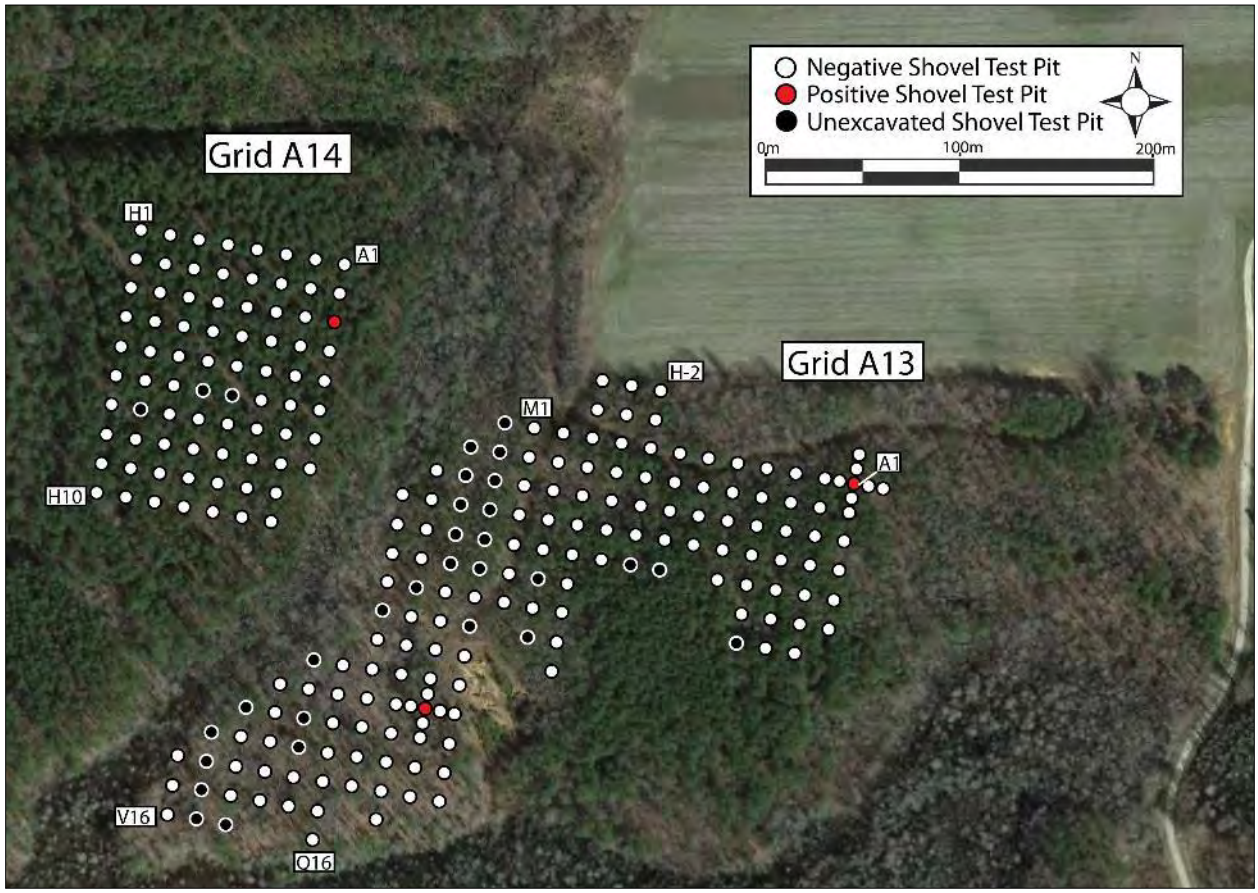
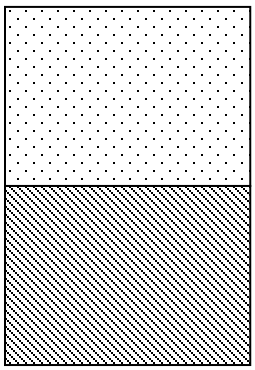


Figure 7-47: Aerial view of shovel testing in Grids A13 and A14.

Soils in these grids consisted of a fairly deep topsoil (A horizon) over subsoil (B horizon). Stratigraphy in a typical shovel test consisted of 2.5Y 6/4 light yellowish brown loamy sand over 2.5Y 5/4 light olive brown sandy clay (Figure 7-48).



2.5Y 6/4 loamy sand
0-43 cm

2.5Y 5/4 sandy clay
43-54 cm

Figure 7-48: Soil profile of Shovel Test E4 in Grid A13, typical of soils in this area.

Only three isolated artifacts were recovered from these two grids: a cut nail and two fragments of lithic shatter.

GRIDS A15 AND A16

These two grids were placed on terraces located on either side of an intermittent stream at its confluence with Passenger Swamp, west of Grids A13 and A14. The grids were placed in this location because these terraces exhibited some potential for prehistoric sites. Vegetation in Grid A15 consisted of mature deciduous forest with an understory of saplings, while Grid A16 contained more pines, heavier undergrowth, and a greater degree of logging disturbance (Figure 7-49; 7-50).

Figure 7-49: Vegetation and terrain in Grid A15, facing east towards edge of finger ridge.

Figure 7-50: Vegetation and terrain in Grid A16, facing east.

A total of 135 shovel tests was excavated in Grid A15, six of which contained cultural material with a few historic artifacts (Figure 7-51). This concentration of material was designated 44SY0326, and it is described in detail below.

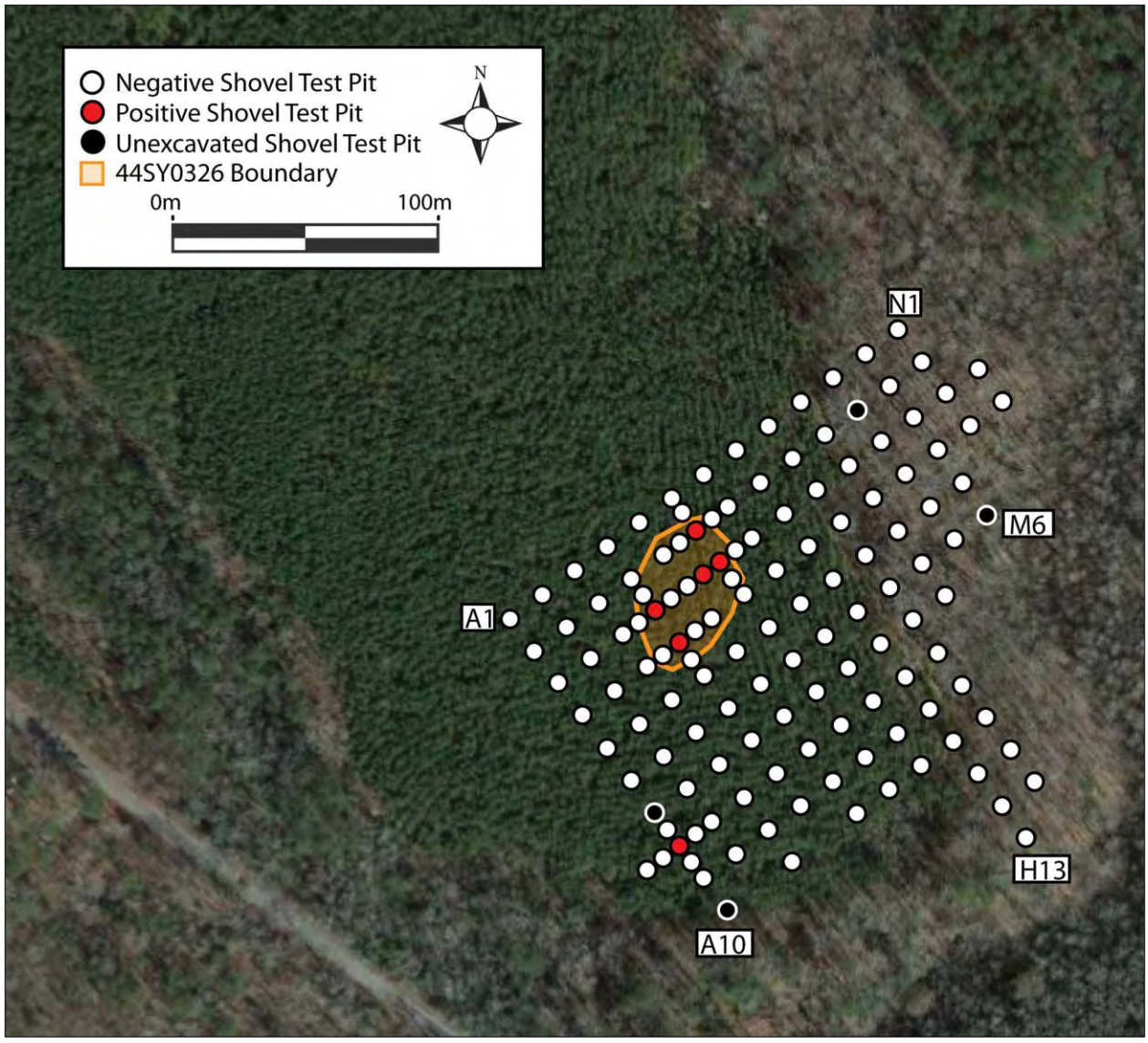


Figure 7-51: Aerial view of shovel testing in Area A15.

A total of 41 shovel tests were excavated in Grid A16, six of which were skipped due to disturbance, and only one of which contained cultural material with a fragment of lithic shatter (Figure 7-52).

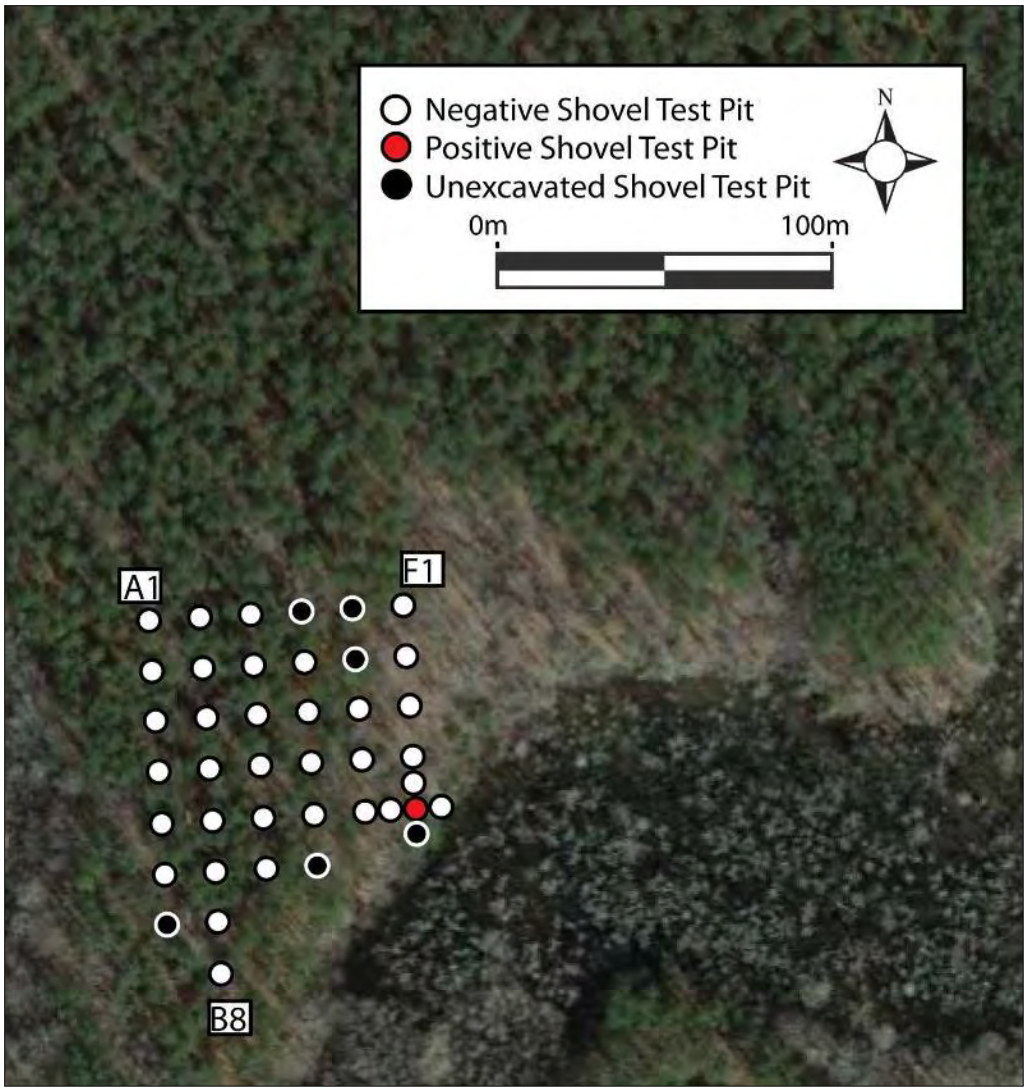


Figure 7-52: Aerial view of shovel tests in Grid A16.

Soils consisted of a somewhat disturbed layer of 10YR 6/4 light yellowish brown silty clay loam topsoil (A horizon) over 10YR 6/4 brownish yellow silty clay subsoil (Figure 7-53).

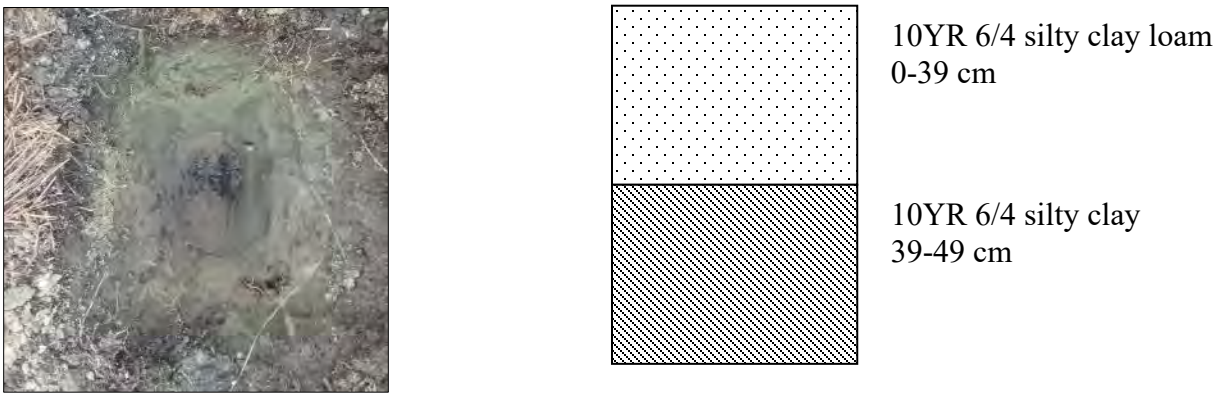


Figure 7-53: Profile of Shovel Test H3, Grid A16, typical of Area A15 and A16.

44SY0326

This site consisted of a concentration of late-nineteenth or early-twentieth century domestic material. Artifacts consisted of a few brick fragments which were not collected, whiteware (N=3), and unidentifiable nails (N=3) (Figure 7-54).

Figure 7-54: Artifacts recovered from 44SY0326.

Due to the degree of logging disturbance and the late date and small quantity of the artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

AREA B

This area is located south of Beechland Road opposite Area A. It measures approximately 516 hectares (1,276 acres), and like Area A, land use consists of a patchwork of agricultural fields and timber stands. Several farm roads and logging roads extend south into the area from Beechland Road, and a transmission line right-of-way crosses east-to-west through the center of the area (Figure 7-55).

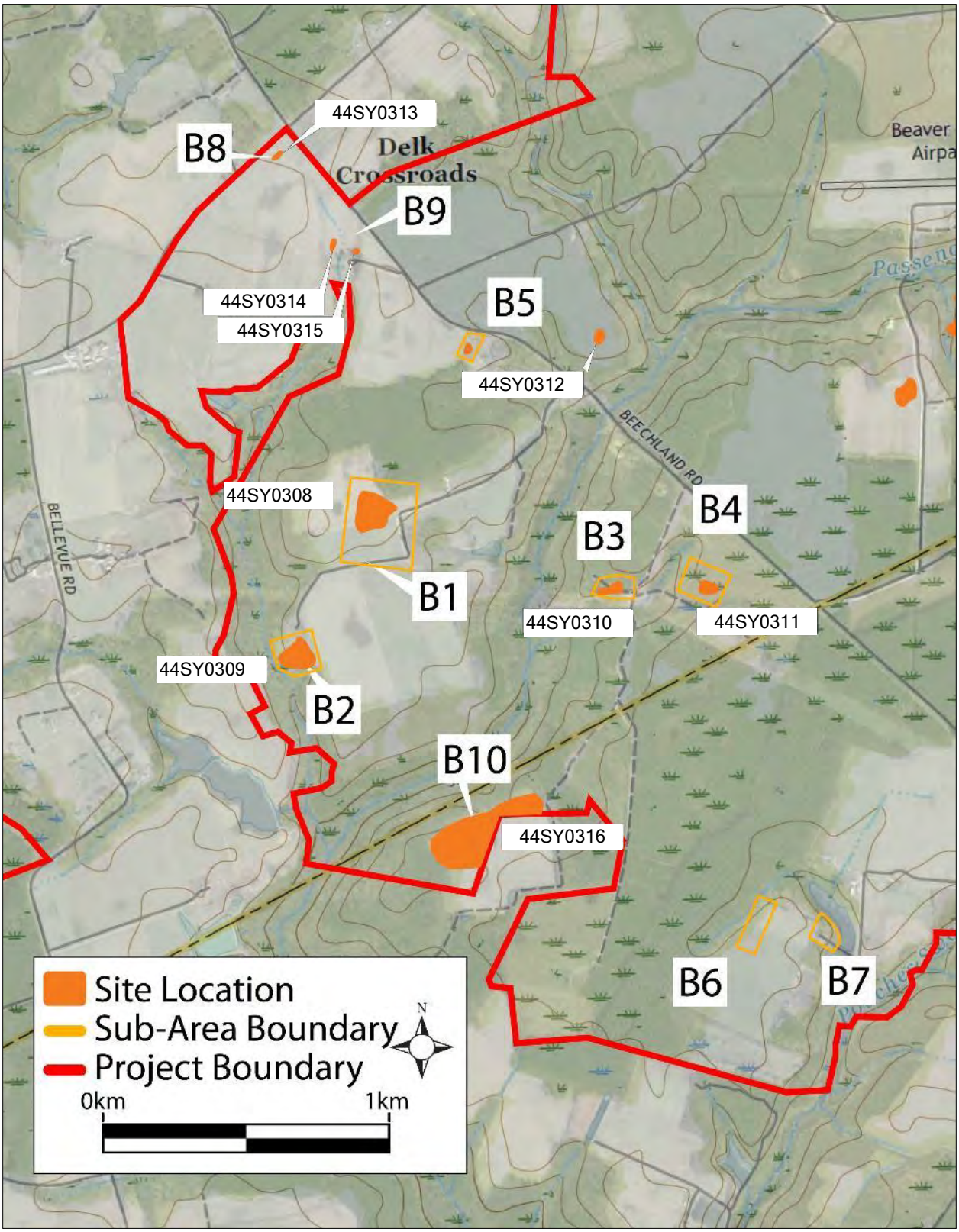


Figure 7-55: Map of sub-areas in Area B.

As in Area A, terrain consisted of a few low uplands and broad terraces surrounded by streams, swamps, and pocosins. Passenger Swamp runs roughly north-south through the center of the project area, and Pouches Swamp forms part of its eastern border (Figure 7-56).

Figure 7-56: View of Passenger Swamp, facing east.

GRID B1

This grid was placed in an agricultural field at the end of a farm road near the center of Area B. A historic site was observed in this area during the preliminary assessment, so the grid was placed over this location. The area covered two different fields: the southern field was fallow at the time of survey, and the northern field was planted in winter wheat (Figure 7-57; 7-58).

Figure 7-57: Overview of northern winter wheat field, facing west.

Figure 7-58: Overview of southern agricultural field, facing east.

A grid of 131 shovel tests was placed in this area, 34 of which contained cultural material (Figure 7-59). Two shovel tests could not be excavated due to disturbance at the edge of the field. Most of the positives were clustered together and were designated 44SY0308, but two isolated positives containing a nail and an iron fragment were interpreted as being associated with nearby farm buildings.

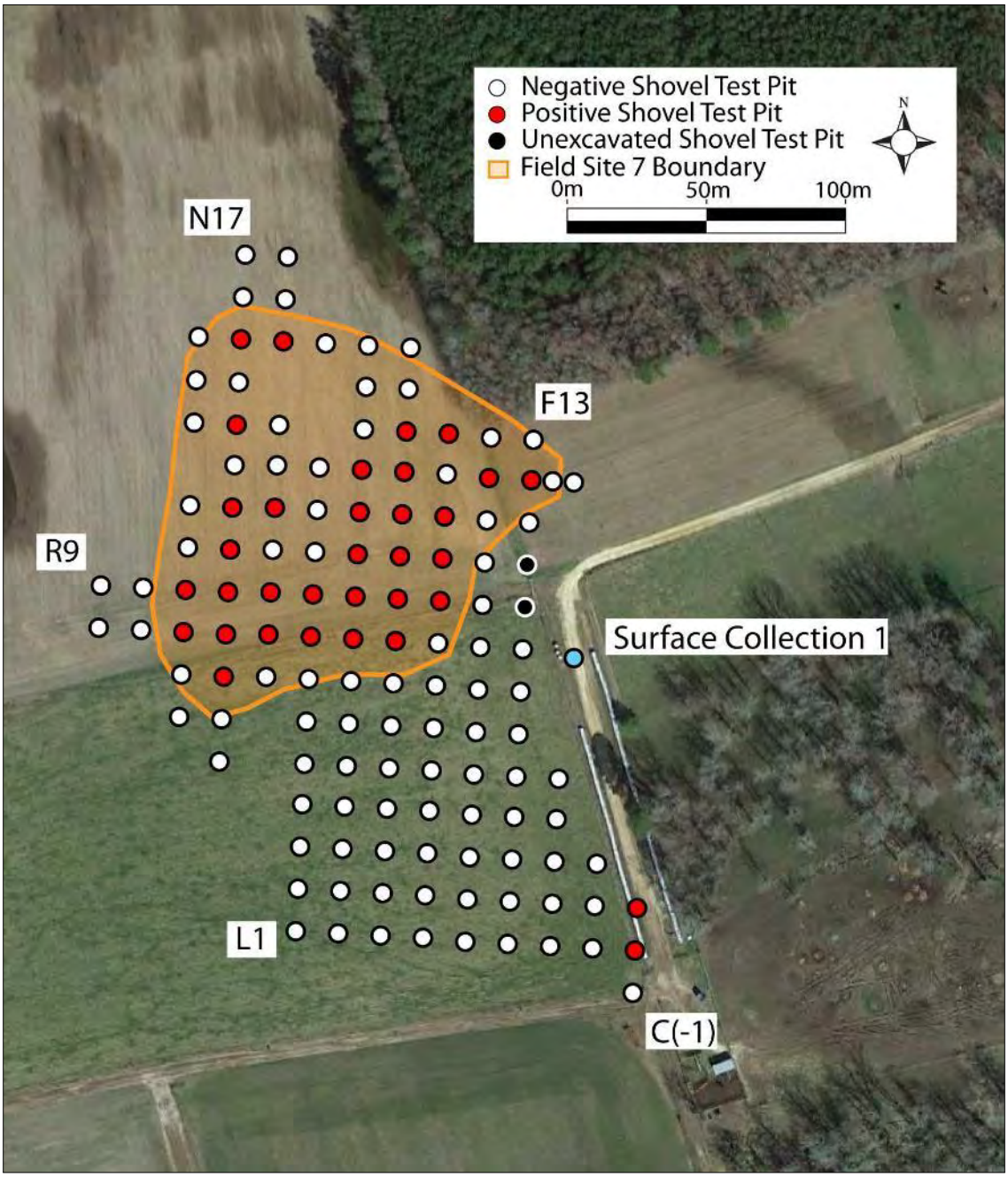
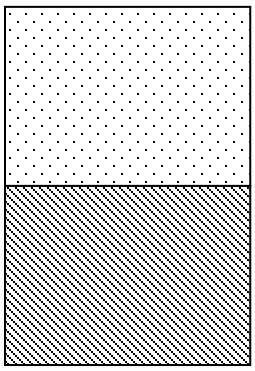


Figure 7-59: Aerial view of subsurface testing in Grid B1.

Soils in Grid B1 consisted of a deep plowzone (Ap horizon) over subsoil (B horizon). A representative shovel test consisted of 10YR 4/6 dark yellowish brown sandy loam plowzone over 10YR 5/8 yellowish brown sandy clay (Figure 7-60).



10YR 4/6 sandy loam
0-30 cm

10YR 5/8 sandy clay
30-40 cm

Figure 7-60: Soil profile of Shovel Test L3

44SY0308

This site was depicted on the 1919 map, and its presence was noted during the assessment in the form of a scatter of surface artifacts noted on the farm road to the southeast of the area. A total of 223 artifacts were recovered, which were typical of an early-to-mid twentieth century domestic site. Materials recovered included handmade brick fragments (N=26); machine cut and unidentifiable nails (N=18); iron fragments (N=21); window glass (N=14); vessel glass, including colorless, aqua, brown, bright green, dark green, cobalt, and milk glass (N=135); ceramics, including whiteware, porcelain, and gray and brown stoneware (N=11); plastic and synthetic fragments (N=5), including an orange four-hole button; a Pepsi bottle cap dated to 1962-1972; and a 1969 penny (Figure 7-61).

Figure 7-61: Representative artifacts from 44SY0308.

The 1966 aerial shows a farm complex in the location of this site, and the date of the artifacts suggests that the farmstead was occupied a few years after this date. Due to this mid-to-late

twentieth century date, the site offers little potential for new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP.

GRID B2

This grid was placed in the location of a site from the 1919 map that was identified during the Phase IA as the remnants of a foundation located in the middle of a small pasture. Terrain consisted of a small knoll with an associated terrace overlooking an intermittent stream in Passenger Swamp. Vegetation at the time of survey consisted of grasses, and a small livestock shed was located on the northern side of the pasture (Figure 7-62).

Figure 7-62: Overview of Grid B2, facing north toward cattle shed.

A grid of 63 shovel tests was laid out in Grid B2, 26 of which contained cultural material. One shovel test could not be excavated due to disturbance. The positive shovel tests were designated 44SY0309, which is described in detail below (Figure 7-63).

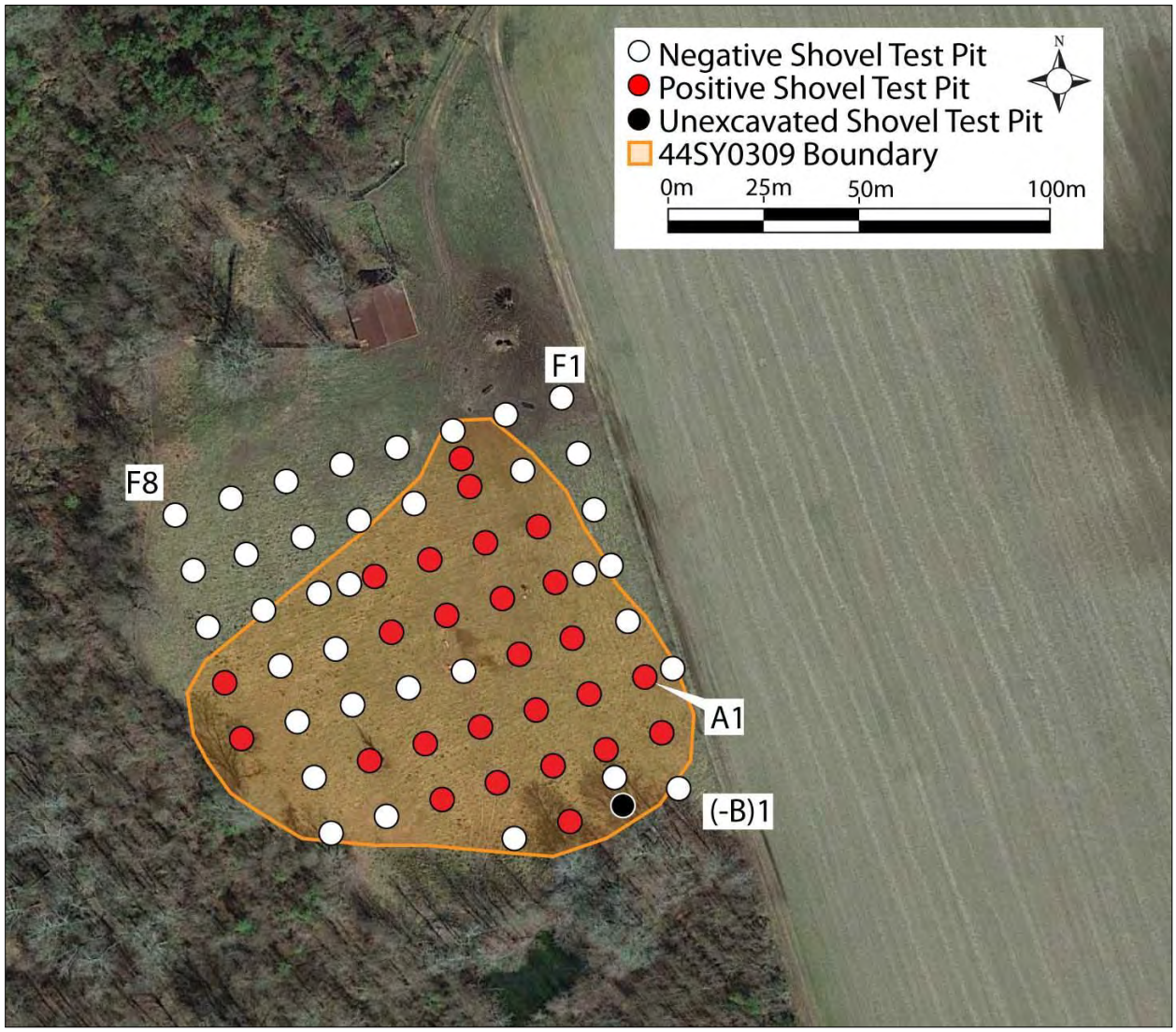
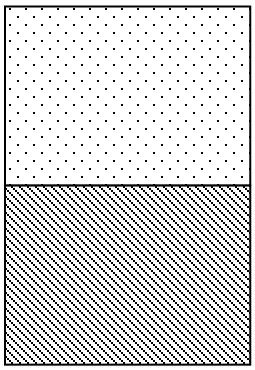


Figure 7-63: Aerial view of subsurface testing in Grid B2.

Soils consisted of a 10YR 4/2 dark grayish brown plowzone (Ap horizon) with a disturbed, uneven transition to subsoil, possibly due to the demolition of the structure. Subsoil (B horizon) consisted of 10YR 5/8 yellowish brown sandy clay (Figure 7-64).



10YR 4/2 sandy loam
0-38 cm

10YR 5/8 sandy clay
38-48 cm

Figure 7-64: Soil profile of shovel test D4.

44SY0309

This site is the location of a structure depicted on the 1919 map. Aerial imagery indicates that a farmhouse was still standing in this location in 2011; in 2013 the structure had been demolished. Portions of the brick foundation and chimney fall remain (Figure 7-65).

Figure 7-65: Overview of foundation and chimney fall, facing southeast.

A total of 141 artifacts were recovered from 44SY0309. These materials were typical of a late-nineteenth or early-twentieth century dwelling. Artifacts included handmade brick and mortar, only a sample of which was collected; machine cut, wrought, and unidentifiable nails (N=71); a fragment of plaster; window glass (N=5); iron hardware and fragments (N=8); vessel glass (N=30), including colorless, brown, aqua, and solarized glass; ceramic (N=11), including porcelain, whiteware, ironstone, and Bristol glazed stoneware; and bone and oyster shell (N=4) (Figure 7-66).

Figure 7-66: Representative artifacts recovered from 44SY0309.

This site is one of the many turn of the twentieth century farmsteads that are depicted on the 1919 map of the study area. However, all of these sites but this one have either been disturbed or are too ephemeral to provide significant archaeological data. As the best surviving example of a farmstead within this vanished community, this site is recommended ***potentially eligible*** for inclusion in the NRHP for its potential to provide significant data about life in this region during the turn of the twentieth century. ***D+A recommends avoidance.*** If avoidance is not possible, ***Phase II evaluation to determine the extent and integrity of the deposits is recommended.***

GRID B3

This grid was placed near the northern center of Area B in the location of two structures depicted on the 1919 map. During the assessment survey, a gravestone and six depressions were identified in this location (Figure 7-67).

This area had been clearcut relatively recently and the trees allowed to regenerate naturally. Vegetation consisted of closely-spaced pine and hardwood saplings with dense undergrowth of woody vines and briars. Systematic testing could not be conducted due to the vegetation, so a series of seven judgmental shovel tests were excavated within bushhogged paths through the underbrush. This subsurface testing revealed a dense concentration of early-to-mid nineteenth century material which was labeled 44SY0310. The cemetery, described in detail in the architectural survey section, was included as part of this site.

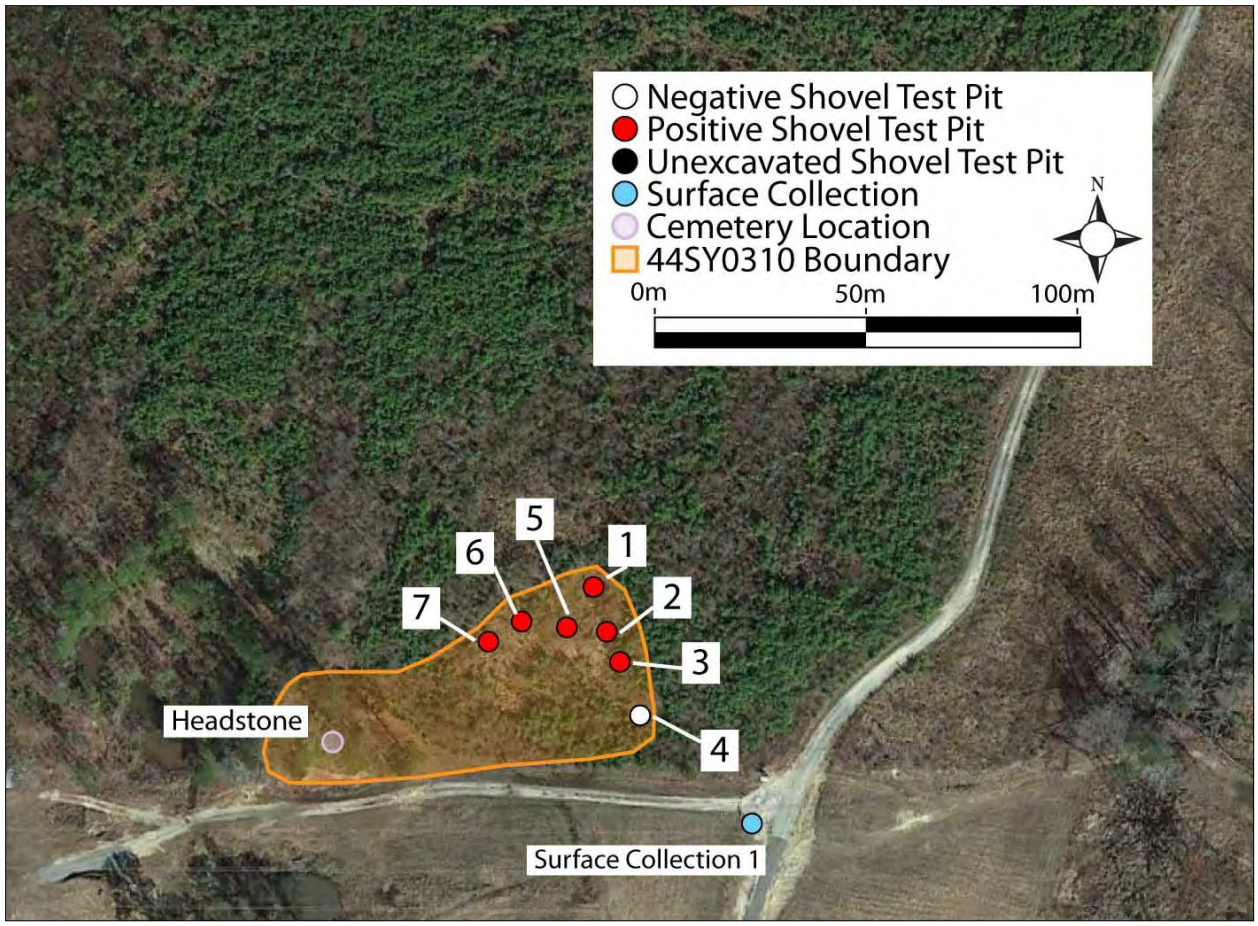


Figure 7-67: Aerial view of subsurface testing at Area B3.

Soils in Grid B3 varied, and some shovel tests appeared to contain a cultural fill layer. This stratigraphy consisted of a thin topsoil (A horizon) consisting of 10YR 3/2 dark grayish brown sandy loam over a cultural horizon of 10YR 4/2 very dark grayish brown sand with brick fragments, over subsoil (B horizon) consisting of 10YR 5/8 yellowish brown sandy clay (Figure 7-68).

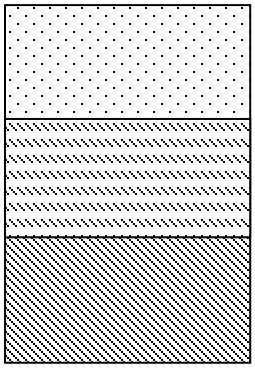


Figure 7-68: Soil profile of Judgmental 5.

44SY0310

This site is in the location of two structures depicted on the 1919 map. It consists of a scatter of early-to-late nineteenth century domestic artifacts and a small family cemetery with one marker commemorating "Mary Person" who died in 1829 (Figure 7-69). Some surface artifacts were noted. One shovel test contained large quantities of handmade brick, suggesting a chimney fall, and another exhibited a cultural fill layer beneath subsoil, suggesting a possible feature (Figure 7-70 through 7-71).

Figure 7-69: Gravestone within graveyard.

Figure 7-70: Location of graveyard, facing west.

Figure 7-71: Brick destruction layer in 44SY0310.

Diagnostic material from this site exhibited a wide date range from the mid-eighteenth through the early-twentieth century (Figure 7-72). Artifacts recovered consisted of handmade brick and sand mortar, most of which was not collected (a sample of 15 fragments was collected); cut and unidentifiable nails (N=4); window glass (N=4); iron chain and other iron fragments (N=12); vessel glass (N=15), including dark green, aqua, colorless, solarized, and milk glass; ceramics (N=16), including Westerwald, shell-edged ware, whiteware, brown and gray salt-glazed stoneware, and ironstone; a fragments of shoe leather with eyelets, and oyster shell fragments (N=12).

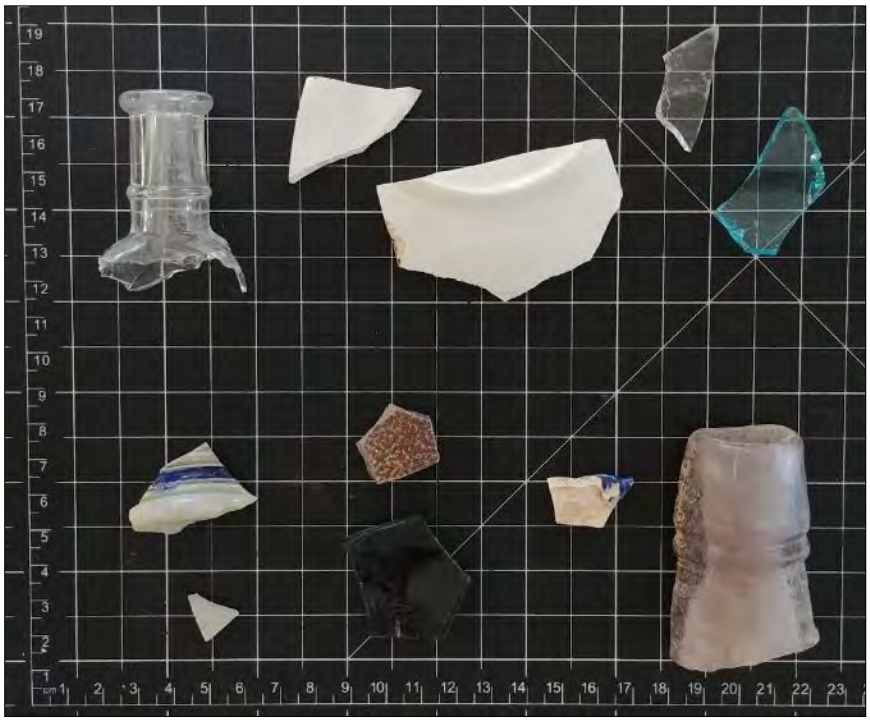


Figure 7-72: Representative artifacts from 44SY0310.

Although disturbance and dense vegetation prevented extensive testing in this area, the artifacts recovered from this site cover a wide date range from the mid-eighteenth century to the early-twentieth century. The early occupation of this site is further supported by the presence of a grave dating to 1829. Due to presence of the grave and the early date of the materials, additional evaluation is recommended to determine the site's potential for eligibility for the NRHP. Avoidance or Phase II evaluation is recommended.

GRID B4

This grid was placed in the north-center of Area B, just east of Grid B3. A structure was depicted on the 1919 map in this area. Terrain consists of a low knoll separated by two drainages that lead into Passenger Swamp. This area was clearcut in 2017, according to satellite imagery, and vegetation at the time of survey consisted of tall grasses, hardwood saplings, and briars (Figure 7-73).

Figure 7-73: Overview of Grid B4, facing west from Shovel Test E5.

A grid of 52 shovel tests was laid out in this area, ten of which contained early-twentieth century cultural material (Figure 7-74). These positive shovel tests were designated 44SY0311, which is described in detail below.

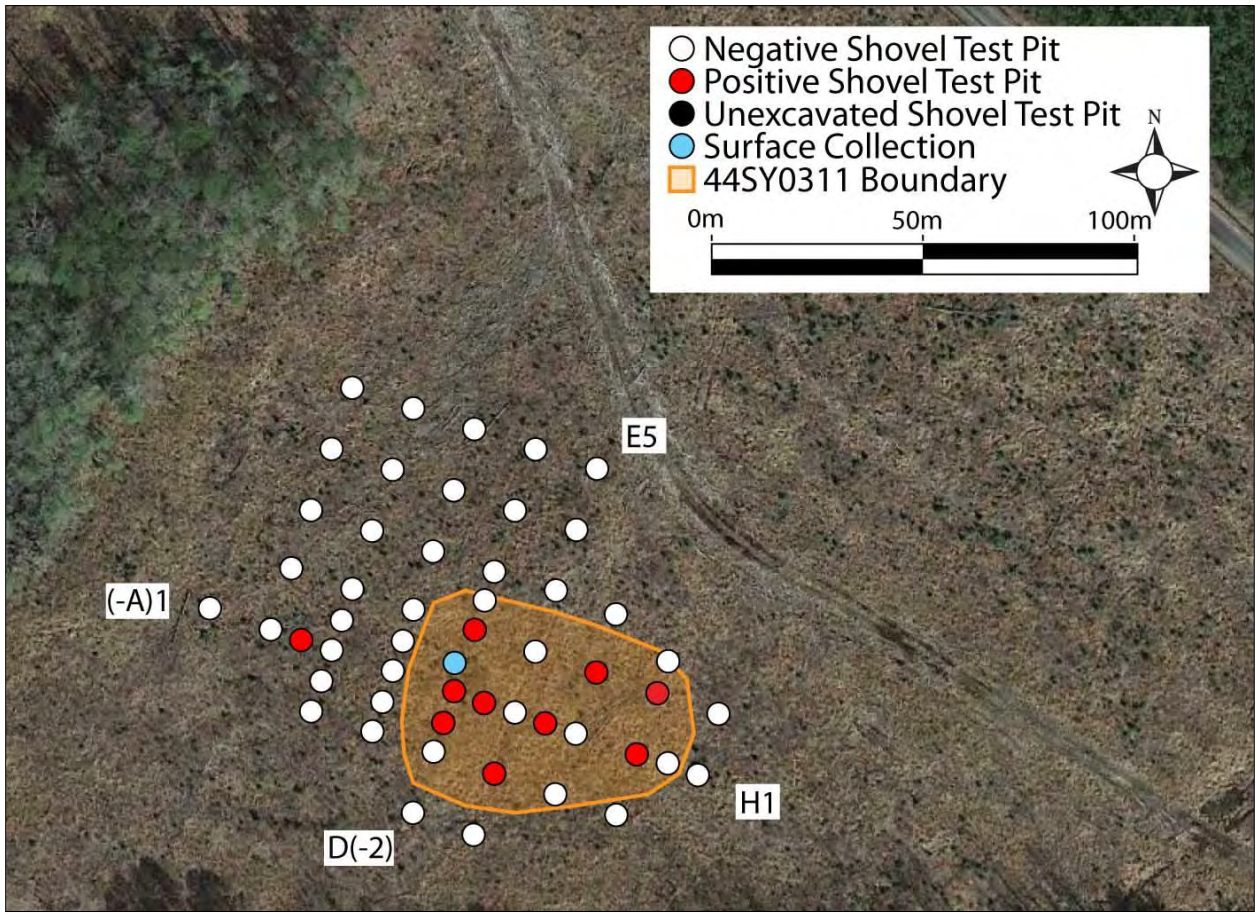
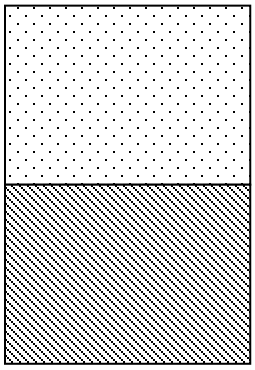


Figure 7-74: Overview of subsurface testing in Grid B4.

Soils were disturbed by logging and consisted of a thin layer that appeared to be the eroded remnants of the eluvial layer (E horizon) consisting of 10YR 5/3 brown sandy loam over 10YR 5/8 yellowish brown sandy clay subsoil (B horizon) (Figure 7-75).



10YR 5/3 sandy loam
0-18 cm

10YR 5/8 sandy clay
18-33 cm

Figure 7-75: Soil profile of Shovel Test E2.

44SY0311

This site consisted of ten positive shovel tests in the approximate location of a building depicted on the 1919 map. Artifacts are consistent with an early-twentieth century domestic site (Figure 7-76). A total of 17 artifacts were recovered, including brick fragments (N=4); machine cut, wrought, and unidentifiable nails (N=4); window glass (N=2); colorless, aqua, and cobalt vessel glass (N=3), including a fragment of a Vaseline jar dating to 1918-1938; an iron buckle; ironstone (N=3); and a prehistoric stone blade.

Figure 7-76: Representative artifacts from 44SY0311.

GRID B5

This grid was placed off of Beechland Road in a copse of scrubby vegetation and mature trees located between a new dwelling and an agricultural field (Figure 7-77). A structure is depicted in this area on the 1919 map, but a few sheds are the only standing buildings that remain. Aerial imagery indicates that a trailer sat in this location from the late 1990s until about 2013.

Figure 7-77: Overview of Grid B5, facing west.

A grid of 25 shovel tests was placed in the copse of trees, two of which could not be excavated due to disturbance (Figure 7-78). A small cluster of four positive shovel tests around the sheds was labeled 44SY0312, which is described in detail below.

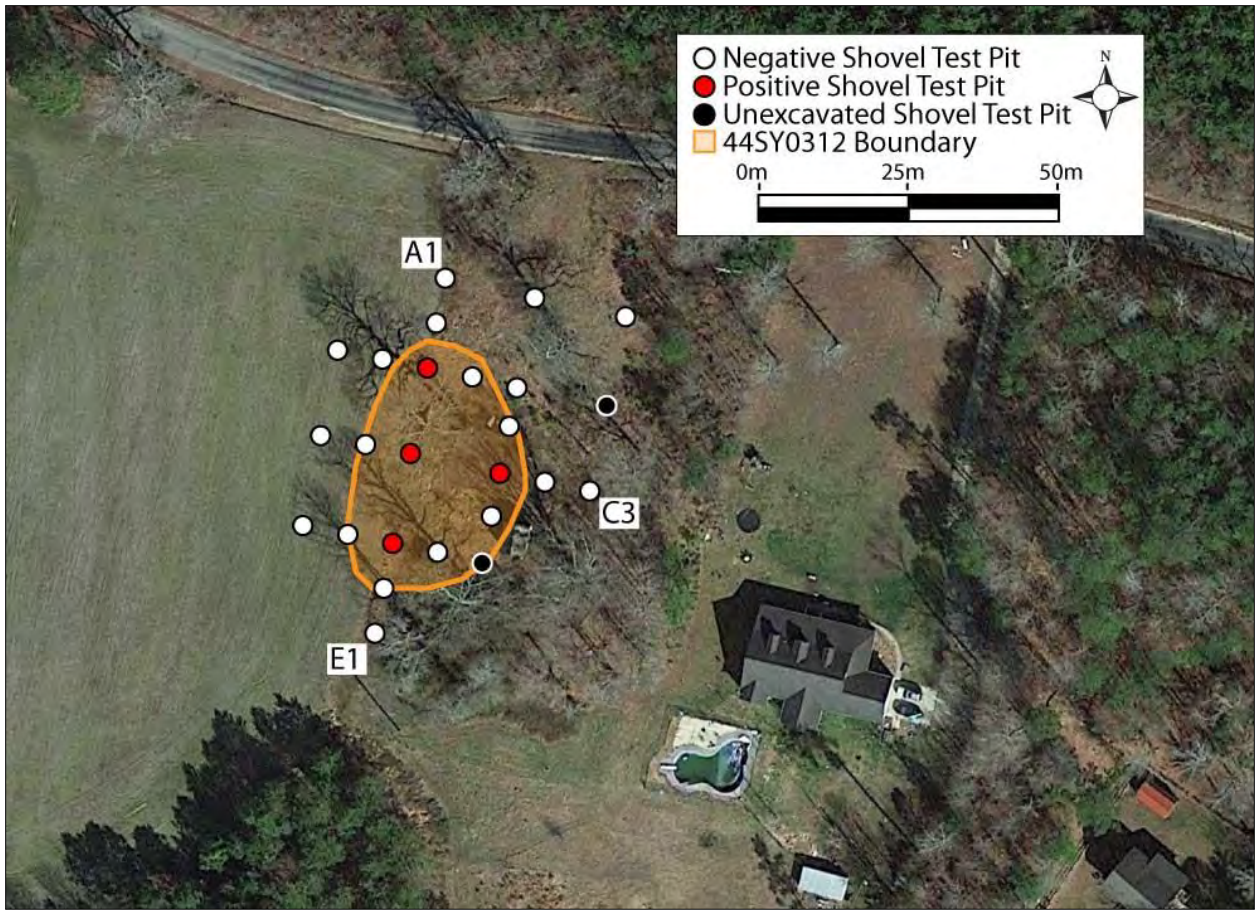


Figure 7-78: Aerial view of subsurface testing in Grid B5.

Soils consisted of 10YR 4/6 dark yellowish brown sandy loam plowzone (Ap horizon) over 10YR 5/8 yellowish brown sandy clay (Figure 7-79).

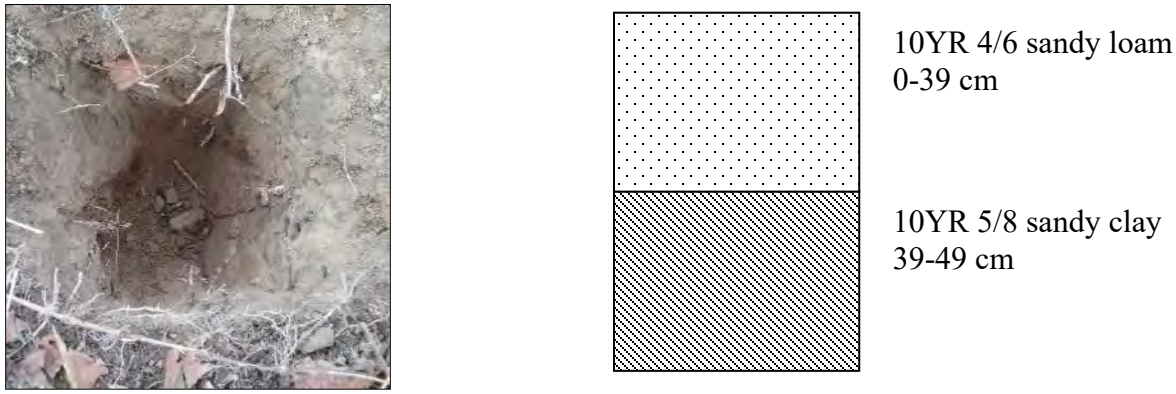


Figure 7-79: Soil profile of Shovel Test B1.

44SY0312

This is a small cluster of four positive shovel tests located in the vicinity of two standing outbuildings that were likely associated with a now-demolished structure depicted on the 1919 map. Artifacts were typical of an early-twentieth century domestic site and consisted of window

glass (N=2); aqua and colorless vessel glass (N=6); whiteware (N=3); and an iron ring bearing (Figure 7-80).

Figure 7-80: Representative artifacts from 44SY0312.

Due to late date and the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

GRID B6

This grid was placed in the southeastern side of Area B on the edge of a terrace overlooking Passenger Swamp. Vegetation consisted of fallow agricultural land on the northeastern side of the grid and young winter wheat on the southwestern side of the grid (Figure 7-81).

Figure 7-81: Vegetation and terrain in Grid B6, facing west.

A grid of 33 shovel tests was laid out in the field (Figure 7-82). No cultural material was recovered.

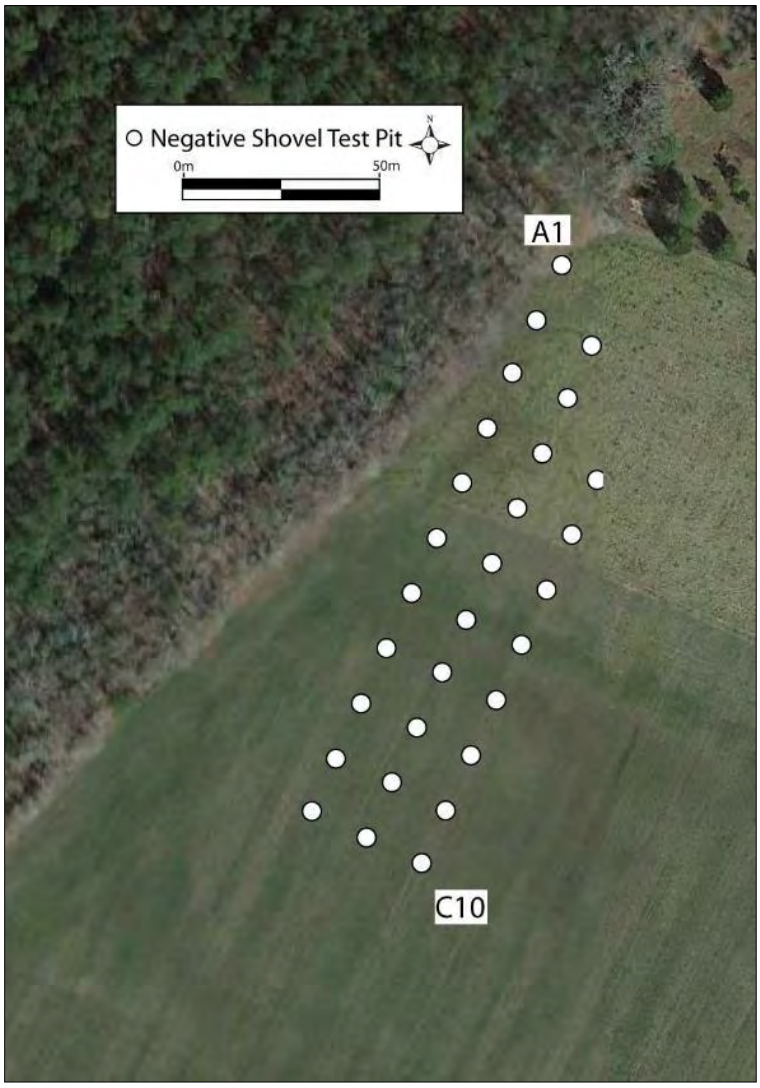
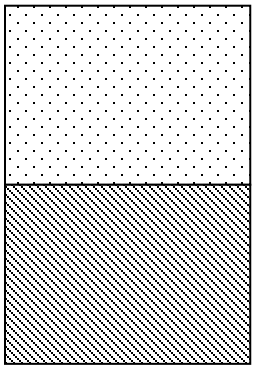


Figure 7-82: Aerial view of subsurface testing in Grid B6.

Soils in this grid consisted of 10YR 4/6 dark yellowish brown sandy loam plowzone (Ap horizon) over 10YR 5/8 yellowish brown sandy clay subsoil (Figure 7-83).



10YR 4/6 sandy loam
0-29 cm

10YR 5/8 sandy clay
29-39 cm

Figure 7-83: Soil profile of Shovel Test C5 in Grid B6.

GRID B7

This grid was placed east of the field where B6 was located, on a small finger ridge overlooking a pond formed from a dammed tributary of Pouches Swamp (Figure 7-84). Vegetation consisted of open land with occasional mature hardwoods. The surrounding area was considered to possess low potential for archaeological sites, but a grid was placed on this finger ridge because its location near Pouches Swamp offered some potential for prehistoric resources.

Figure 7-84: Overview of pond in Grid B7, facing west.

A grid of 18 shovel tests was laid out on the finger ridge, two of which could not be excavated due to disturbance (Figure 7-85).

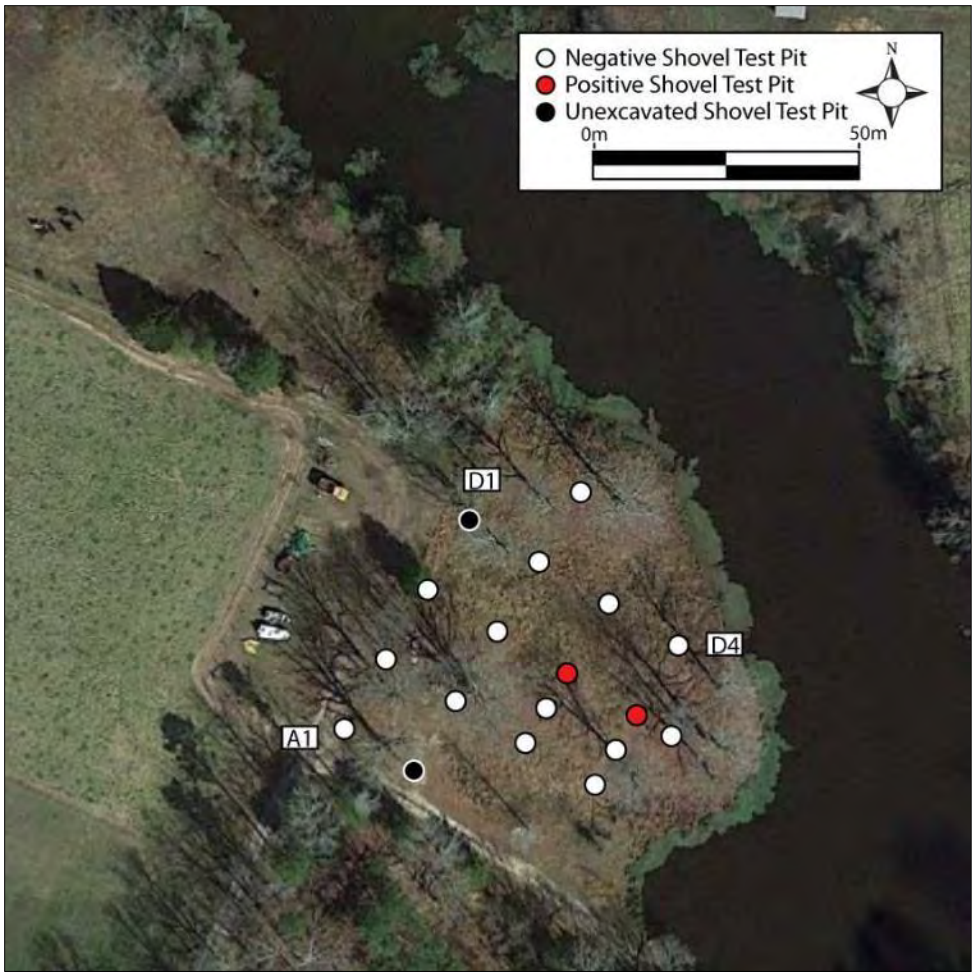
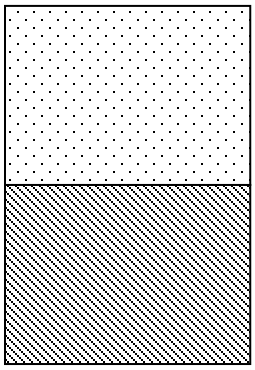


Figure 7-85: Aerial view of subsurface testing in Grid B7.

Two fragments of sand-tempered prehistoric pottery, likely from the same vessel, were recovered from Shovel Test C4, and a quartzite flake was recovered from C3. These few artifacts were likely the result of loss or casual discard, and they are classified as a location rather than a site.

Soils consisted of 10YR 4/4 dark yellowish brown sandy loam plowzone (Ap horizon) over 10YR 5/yellowish brown mottled with 10YR 4/1 dark gray silty clay subsoil (B horizon) (Figure 7-86).



10YR 4/4 sandy loam
0-27 cm

10YR 5/8 m/w 10YR
4/1 sandy clay
27-37 cm

Figure 7-86: Soil profile of Shovel Test C2, typical of Area B7.

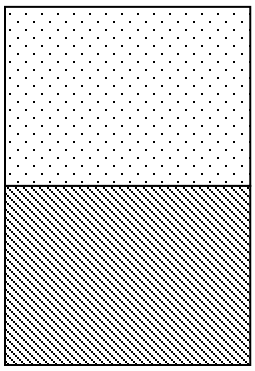
GRID B8

This grid was placed in the northwest corner of Area B, at the intersection of White Marsh and Beechland Road, historically known as Delk Crossroads. Although no structures were mapped in this area on the 1919 topo, historic sites often sit at crossroads. Vegetation in this area consisted of dead corn stalks and sparse grasses, and the visibility of the ground surface was good enough to allow for pedestrian survey (Figure 7-87).

Figure 7-87: Overview of Grid B8, facing west.

A rectangular block measuring 2.5 hectares (6.2 acres) was pedestrian surveyed in transects spaced 15 meters (50 feet) apart. A small scatter of surface artifacts along White Marsh Road was labeled Field Site 12. This site is described in detail below.

Two judgmental shovel tests were excavated to illustrate soils, which were the same as those in Grid B7, with a layer of sandy loam plowzone over mottled sandy clay subsoil (Figure 7-88).



10YR 4/4 sandy loam
0-29 cm

10YR 5/8 m/w 10YR 4/1 sandy clay
29-40 cm

Figure 7-88: Soil profile of Judgmental 1.

FIELD SITE 12

This site consisted of a small scatter of late-nineteenth artifacts observed on the surface of an agricultural field. Artifacts consisted of a few sherds of undecorated whiteware, shell-edged whiteware, and clear vessel glass. Only the shell-edged ware was collected.

Due to the lack of surface features and the small number of artifacts observed, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

GRID B9

This grid was placed to the east of Grid B8 near a standing dwelling and the location of a structure depicted on the 1919 map, situated on the south side of Beechland Road. As in Area B8, vegetation consisted of dead corn stalks and sparse young grasses (Figure 7-89).

Figure 7-89: Vegetation and terrain in Area B9, facing north toward Beechland Road.

As in Grid B8, ground visibility allowed for pedestrian survey, so an area measuring 2.4 hectares (6 acres) was systematically pedestrian surveyed in transects spaced at 15-meter (50-foot) intervals (Figure 7-90). Two small historic scatters were noted on the northwest and northeast side of the yard of the standing dwelling. These sites were designated 44SY0314 and 44SY0315, respectively. They are described in detail below.

Figure 7-90: Aerial view of pedestrian survey in Grid B9.

One judgmental was excavated in Grid B9 to illustrate soils, which were similar to those in Area B7 and B8, but without the mottled subsoil (Figure 7-91)

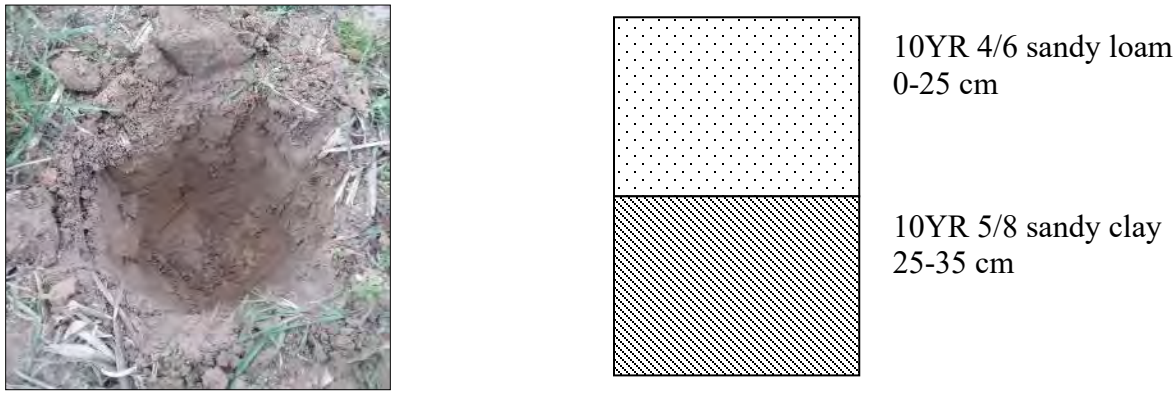


Figure 7-91: Soil profile of Judgmental 1 in Area B9.

44SY0314 AND 44SY0315

Site 44SY0314 was located to the northwest of the occupied dwelling and consisted of a surface scatter of late-nineteenth century artifacts, including transferware, colorless glass, olive glass, and undecorated whiteware (Figure 7-92). Site 44SY0315 was located to the northeast of the dwelling. It consisted of iron fragments, whiteware, and colorless glass (Figure 7-93).

Figure 7-92: Surface artifacts from 44SY0314.

Figure 7-93: Surface artifact from 44SY0315.

Due to the lack of surface features and the small quantity of artifacts observed, these sites offer little potential to provide new or significant archaeological data. Therefore, they are recommended not eligible for inclusion in the NRHP.

GRID B10

This grid was placed in two bays of a large cotton field overlooking Passenger Swamp. The field had been harvested before survey, and vegetation consisted of a few sparse grasses (Figure 7-94). Ground visibility was good enough to allow for pedestrian survey.

Figure 7-94: Overview of fields in Grid B10, facing west.

Because ground visibility was good, the northern portion of this field, which overlooks Passenger Swamp, was systematically pedestrian surveyed (Figure 7-95). A widely diffuse historic site was observed over the western bay of the field; it was designated Field Site 16 and is described in detail, below.

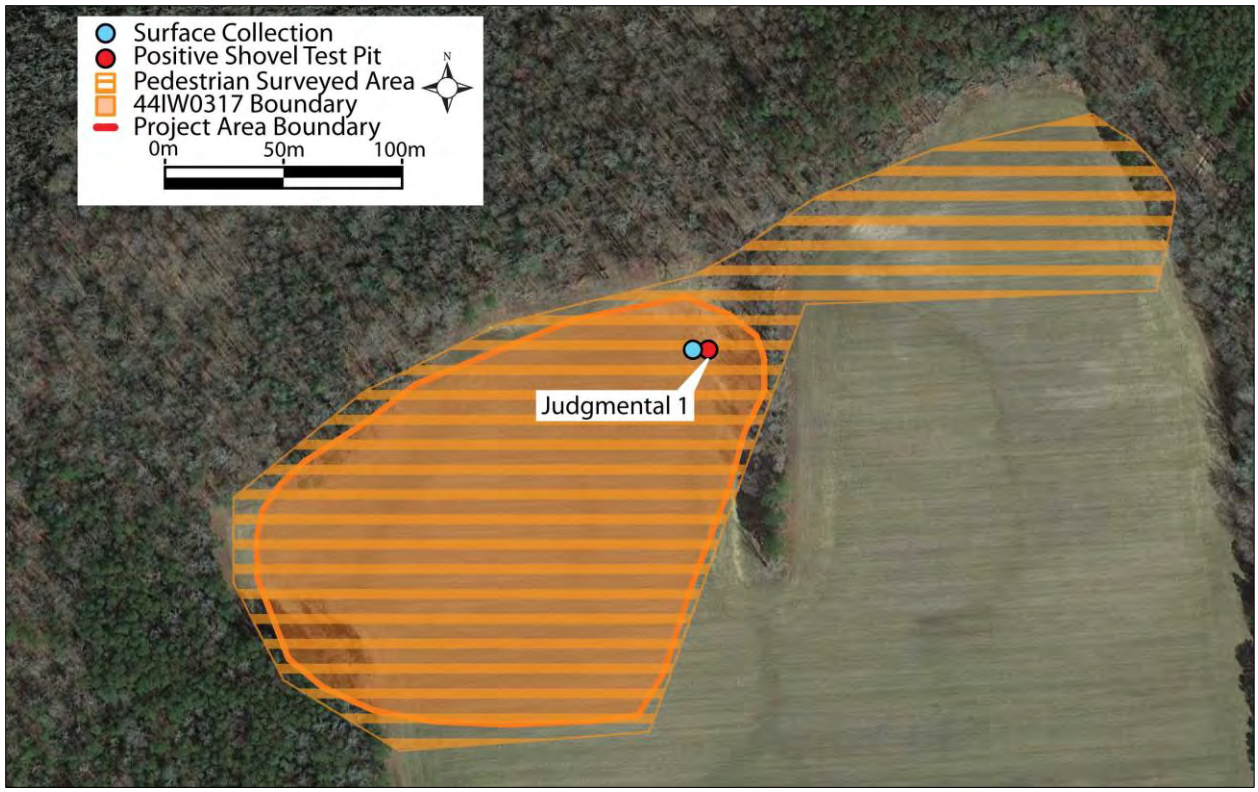


Figure 7-95: Aerial view of pedestrian survey in Area B10.

One judgmental shovel test was excavated to illustrate soils. Stratigraphy consisted of a layer of 10YR 5/4 yellowish brown sand plowzone (Ap horizon) over 10YR 6/6 brownish yellow sand subsoil (B horizon) (Figure 7-96).

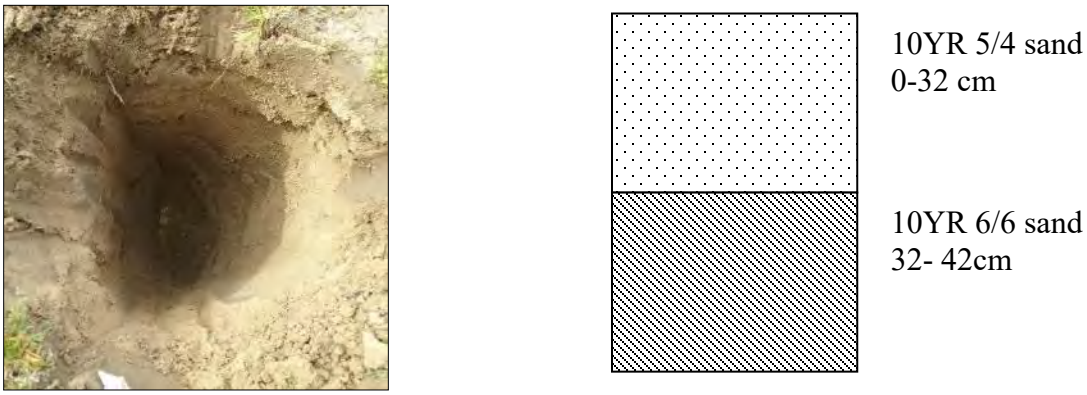


Figure 7-96: Soil profile of Judgmental 1, illustrating soils in Grid B10.

44IW0317

This site was a diffuse scatter of early-twentieth century artifacts observed in the western bay of a large cotton field. Most of the material consisted of small brick and whiteware fragments (Figure 7-97).

Figure 7-97: Fragment of whiteware from 44IW0317.

Due to the diffuse nature of the scatter, the small quantity of artifacts, and the lack of surface features, this site offers little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for inclusion in the NRHP.

AREA C

This area consists of a group of contiguous parcels located on the western side of the project area (Figure 7-98). It is located directly north of the Surry County line. Mill Swamp bounds the area to the east, and arbitrary parcel lines form the remaining boundaries. White Hill Trail runs northwest-southeast through the center of the area, and Berymans Corner Road runs north-south through the eastern side of the area. Farm roads and logging road provide access.

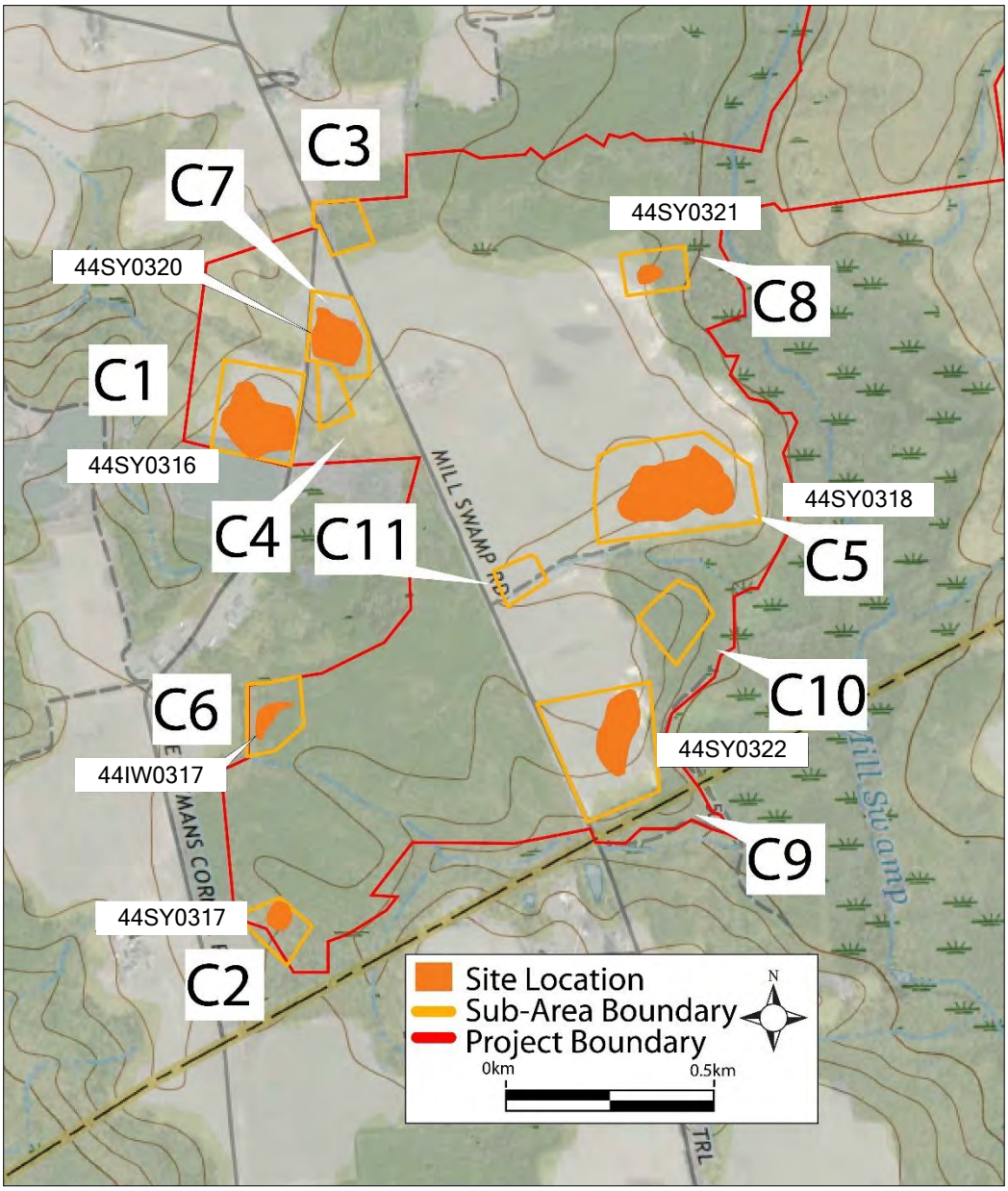


Figure 7-98: Overall map showing sub-areas in Area C.

Terrain consists of a broad, level upland that terminates in low finger ridges and terraces overlooking Mill Swamp on the east, and a small, swampy tributary of the Blackwater River on the west. Vegetation at the time of survey was divided between agricultural fields and managed stands of timber (Figure 7-99).

Figure 7-99: Overview of vegetation and terrain in Area C, facing south from center of area.

The grids below are detailed below in geographic order, beginning in the northwest corner of the property, rather than in alphanumeric order.

GRID C1

This grid was placed in the northwest corner of Area C, over the location of a cemetery and domestic site that were identified during the assessment. Vegetation consisted of short grasses and weeds within a peanut field that had not yet been planted (Figure 7-100).

Figure 7-100: Overview of Grid C1, facing northwest.

The Simmons-Brown cemetery is located in the southwest corner of this field. It consists of at least 30 burials, based on headstones and footstones (Figure 7-101). Death dates range from the 1880s until the 2010s. This cemetery is described in detail in the architectural survey volume of this report.

Figure 7-101: Simmons-Brown cemetery, facing north.

Grid C1 contained 155 shovel tests, 46 of which contained early twentieth-century cultural material (Figure 7-102). Six shovel tests could not be excavated because they fell within the cemetery. The group of positive shovel tests was designated 44SY0316, and it is described in detail below.

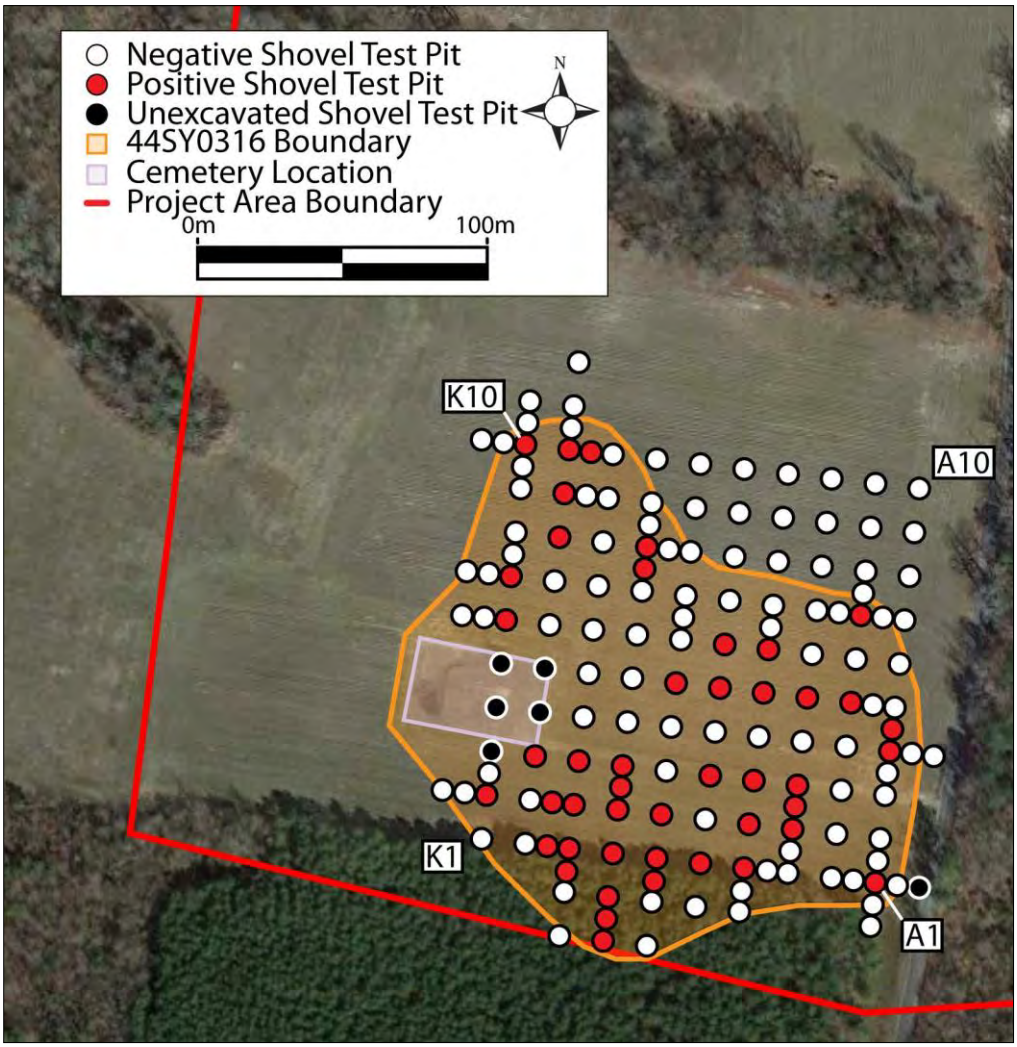
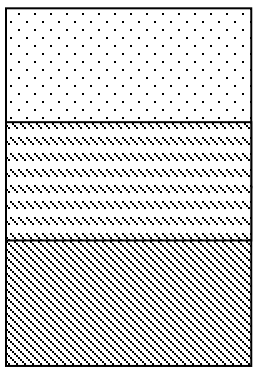


Figure 7-102: Aerial view of subsurface testing in Grid C1.

Soils in Grid C1 consisted of a modern plowzone (Ap1) over an older relict plowzone (Ap2) over subsoil. A representative profile consisted of a layer of 10YR 5/3 brown sandy clay loam Ap1 horizon over 10YR 6/3 pale brown sandy clay loam Ap2 horizon, over 10YR 6/6 brownish yellow clay B horizon (Figure 7-103).



10YR 5/3 sandy clay loam
0-22 cm

10YR 6/3 sandy clay loam
22-28 cm

10YR 6/6 sandy clay
28-33cm

Figure 7-103: Soil profile of Shovel Test G6.

44SY0316

This site corresponds with a structure depicted on the 1919 map of the area. It consists of a wide scatter of early-twentieth century materials (Figure 7-104). Artifacts include brick fragments (most of which were not collected); window glass (N=5); machine cut or wrought nails (N=5); an agateware doorknob; vessel glass (N=52), including colorless, aqua, solarized, brown, dark green, and milk glass; ceramics (N=44), including whiteware, ironstone, porcelaneous, and Albany slip stoneware. No features were observed, and the artifacts were scattered across the field as if the dwelling had been pushed down and plowed under.

Figure 7-104: Representative artifacts recovered from 44SY0316.

Due to the diffuse spread of the artifacts, the apparent disturbance to the site, and the late date of the materials, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

GRID C4

This grid was placed across Berrymans Corner Road just east of Grid C1, in the location of a structure depicted on the 1919 map. The area had been covered forest until it was logged at some point between 2014 and 2017. At the time of survey, vegetation consisted of an open, fallow field covered in grasses and weeds (Figure 7-105).

Figure 7-105: Overview of Grid C4, facing south.

Grid C4 contained 24 shovel tests, one of which could not be excavated due to disturbance (Figure 7-106). None of the shovel tests were positive, and no evidence of the structure depicted on the 1919 map was noted.

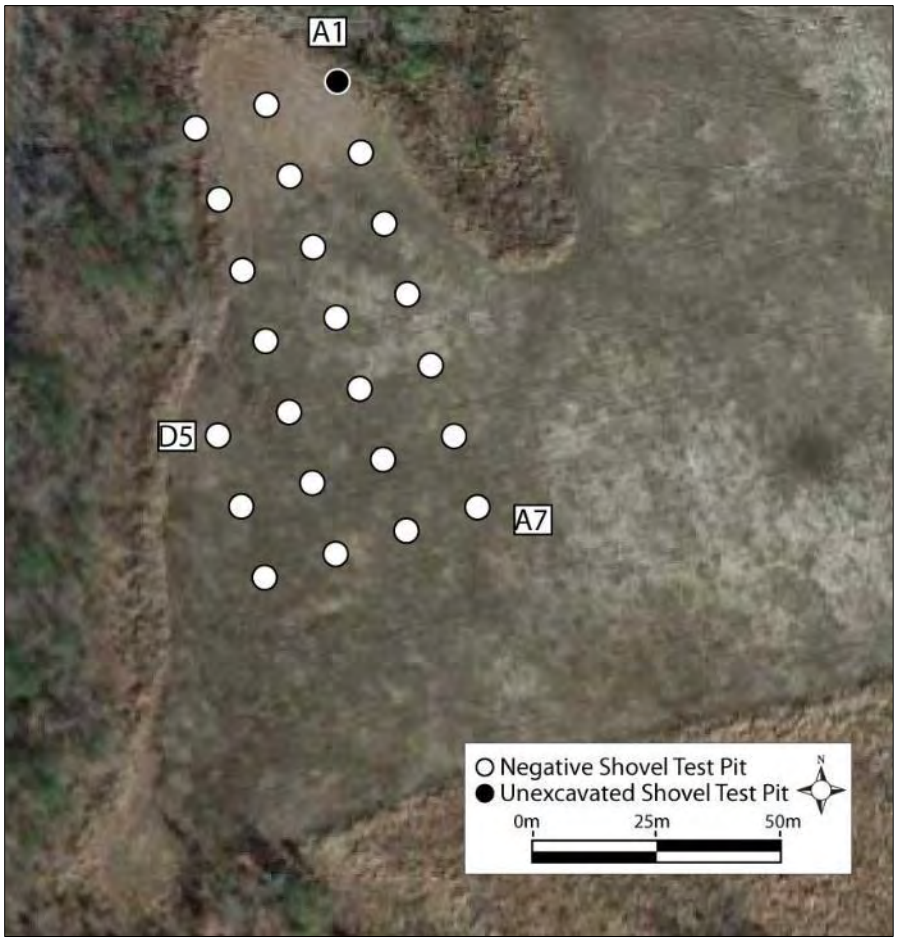
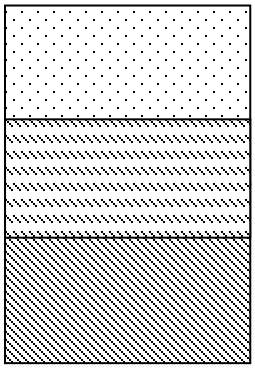


Figure 7-106: Aerial view of subsurface testing in Grid C4.

Soils had been disturbed by logging. Typical stratigraphy consisted of a disturbed topsoil (A horizon) of 10YR 4/4 dark yellowish brown sandy loam over an eluvial layer (E horizon) consisting of 10YR 5/4 yellowish brown sand over 10YR 5/6 yellowish brown sandy clay subsoil (Figure 7-107).



10YR 4/4 sandy loam
0-14 cm

10YR 5/4 sand
14-46 cm

10YR 5/6 sandy clay
46-56 cm

Figure 7-107: Soil profile of Shovel Test A4.

GRID C7

When the house site shown on the 1919 map was not identified in its projected location in Grid C4, a second grid was placed directly north of C4. The grid was located in a triangle of land created by the intersection of Berrymans Corner and Mill Swamp Roads. It was positioned over top of a cluster of mature trees near a residential powerline, the presence of which suggested that a house had stood here (Figure 7-108). The northern half of the grid was part of a large agricultural field. Aerial imagery shows that the southern half of the area had been in forest until it was logged at some point between 2014 and 2017.

Figure 7-108: Mature trees and powerline in Grid C7, facing west.

A grid of 99 shovel tests was placed over the projected house location, six of which could not be excavated due to disturbance (Figure 7-109). A total of 33 of these shovel tests contained twentieth century cultural material: this concentration was designated 44SY0320 and is described in detail below.

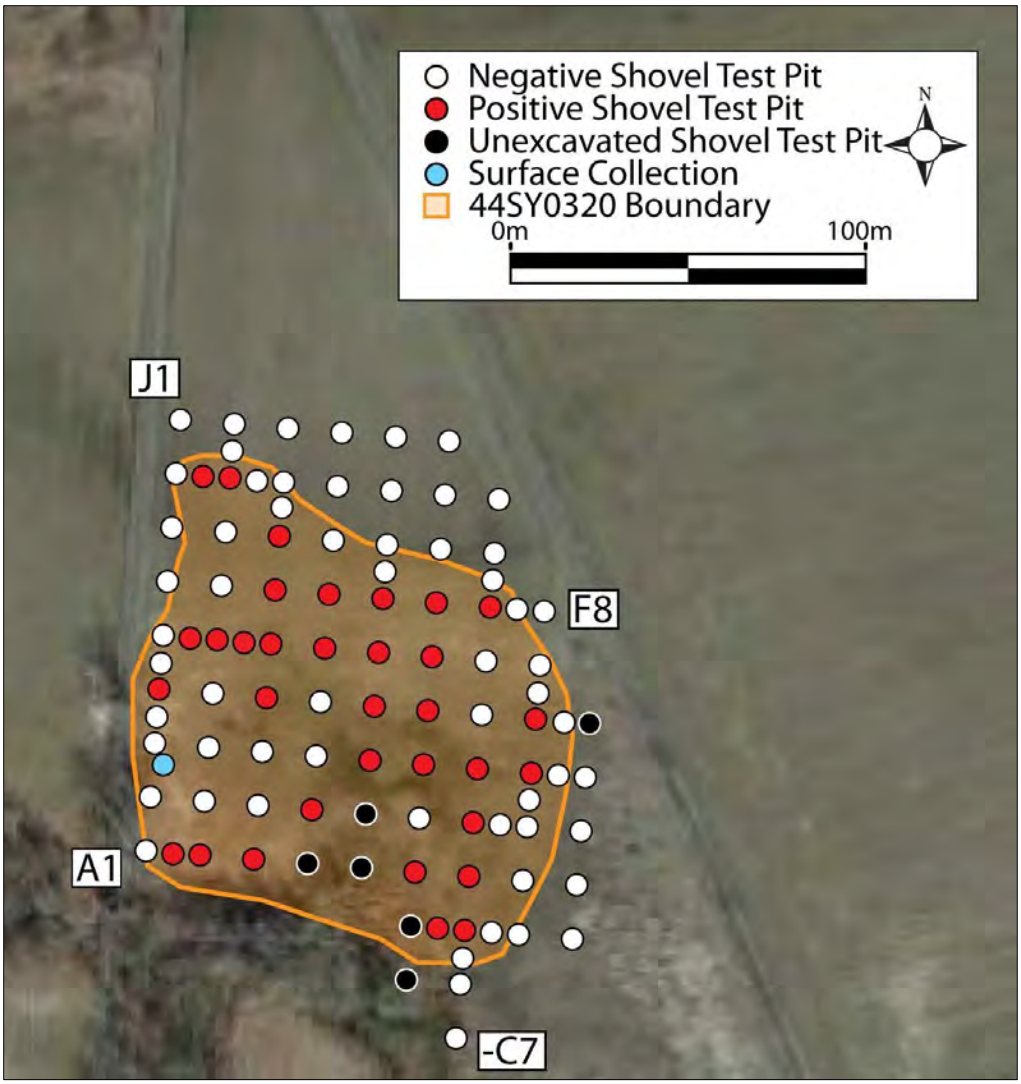
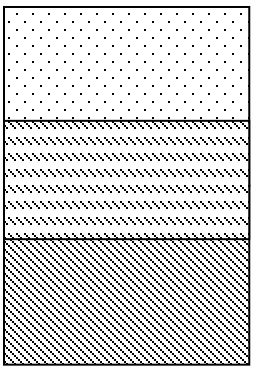


Figure 7-109: Aerial view of subsurface testing at Grid C7.

Soils in this area consisted of a layer of disturbed topsoil over subsoil. In some placed, a remnant of the E horizon remained intact beneath the disturbed layer. A shovel test exhibiting this disturbed profile consisted of a 10YR 5/3 brown sandy loam disturbed topsoil (A horizon) over a 10YR 5/4 yellowish brown sand eluvial layer (E horizon) over 10YR 5/8 yellowish brown subsoil (B horizon) (Figure 7-110).



10YR 5/3 sandy loam w/ brick and plastic
0-20 cm

10YR 5/4 sand
20-25 cm

10YR 5/8 sandy clay
25-33cm

Figure 7-110: Soil profile of Shovel Test E 1.5.

44SY0320

This site consisted of a large, dense cluster of positive shovel tests surrounding surface expressions indicative of a twentieth century house site, including two large, mature hardwoods, a graded area, and a residential powerline. Artifacts included brick fragments (N=29); a mortar fragment; wrought, cut, wire, and unidentifiable nails (N=28); window glass (N=22); iron fragments (N=14); vessel glass (N=107), including dark green, colorless, aqua, brown, solarized, cobalt, bright green, and safety glass; stoneware, including Albany slip (N=2); ironstone (N=7); plastic fragments (N=3), a zinc canning lid; and a silver plated utensil handle (Figure 7-111). Two vessel glass fragments had maker's marks that could be dated to 1938 and 1932-1968. No surface features were noted, but one shovel test (Radial B7.5) exhibited complex stratigraphy with multiple thin strata that likely indicates a destruction layer.

Figure 7-111: Representative artifacts recovered from 44SY0320.

GRID C3

This grid was placed in the woods that border the north side of the field where 44SY0320 was identified. This was the projected location of another structure depicted on the 1919 map. Aerial imagery indicates that this area was clearcut in 2003, and vegetation at the time of survey consisted of young pines with an understory of hardwood saplings (Figure 7-112).

Figure 7-112: Overview of Grid C3, facing south.

The area was visibly disturbed by logging, with ruts and pushpiles, so only a small grid of nine shovel tests was placed to confirm subsurface disturbance. No cultural material was recovered, and no surface features were noted (Figure 7-113).

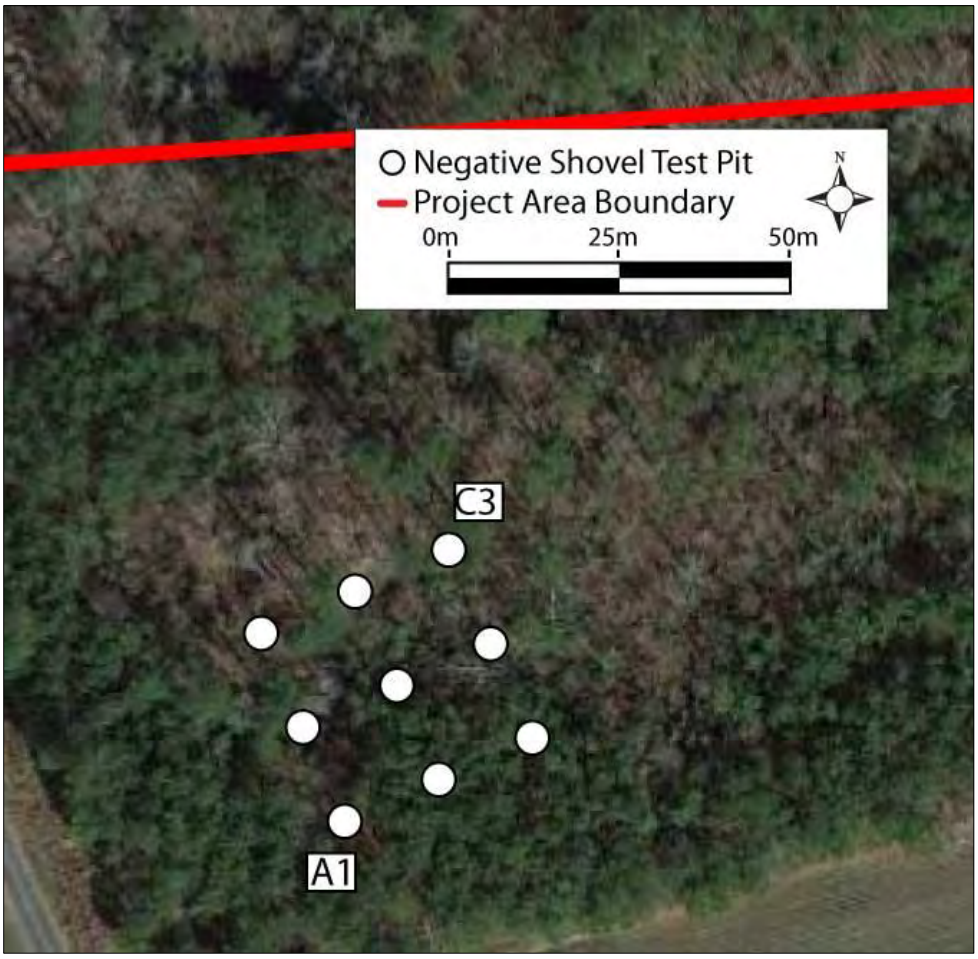
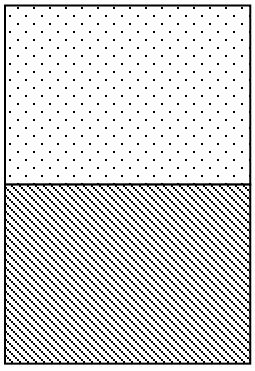


Figure 7-113: Aerial view of subsurface testing in Grid C3.

Soils consisted of a disturbed and mottled topsoil (A horizon) of 10YR 5/3 brown mottled with 10YR 5/4 yellowish brown sandy clay over a subsoil consisting of 10YR 6/6 brownish yellow mottled with 10YR 5/8 yellowish brown sandy clay (Figure 7-114).



10YR 5/3 m/w 10YR 5/4
sandy clay
0-25 cm

10YR 6/6 m/w 10YR
5/8 sandy clay
25-50 cm

Figure 7-114: Soil profile of Shovel Test B3.

GRID C8

This grid is located on the northeast corner of a large agricultural field, opposite Grid C7. A structure is depicted in this location on the 1919 map, and a collapsed outbuilding with a metal roof was noted in the woods (Figure 7-115). Vegetation consisted of mature pines with an undergrowth of hardwood saplings on the east side of the area, and a large, fallow agricultural field on the west. (Figure 7-116)

Figure 7-115: Overview of collapsed outbuilding and vegetation within woodline, facing southwest.

Figure 7-116: Overview of Grid C8 from Shovel Test B(-1), facing south.

A grid of 36 shovel tests was placed in this area, three of which could not be excavated due to disturbance. Three shovel tests contained cultural material: the positives and structural ruins together were designated 44SY0321.

44SY0321

This site consisted of a cluster of positive shovel tests associated with a collapsed outbuilding in Grid C8. Artifacts consisted of a sherd of ironstone and two fragments of brick (Figure 7-117).

Figure 7-117: Ironstone recovered from 44SY0321.

Due to the lack of material, this site is recommended not eligible for inclusion in the NRHP.

GRID C5

This grid is located south of grid C8 within the same large, fallow peanut field (Figure 7-118). Terrain consists of a terrace butting up against the edge of Mill Swamp to the east and south. The field follows the contours of the land, and the wetland is wooded. The grid was placed in this location to test for a site projected on the 1919 topographic map. Evidence of a demolished structure was visible on the surface, consisting of brick and cement fragments and other artifacts.

Figure 7-118: Location of Grid C5. Change in vegetation corresponds with greatest concentration of artifacts.

A total of 166 shovel tests was placed in this grid, eight of which could not be excavated due to disturbance (Figure 7-119). A total of 101 shovel tests were positive for late-nineteenth through early-twentieth century material. This artifact concentration was designated 44SY0318 and is described in detail below.

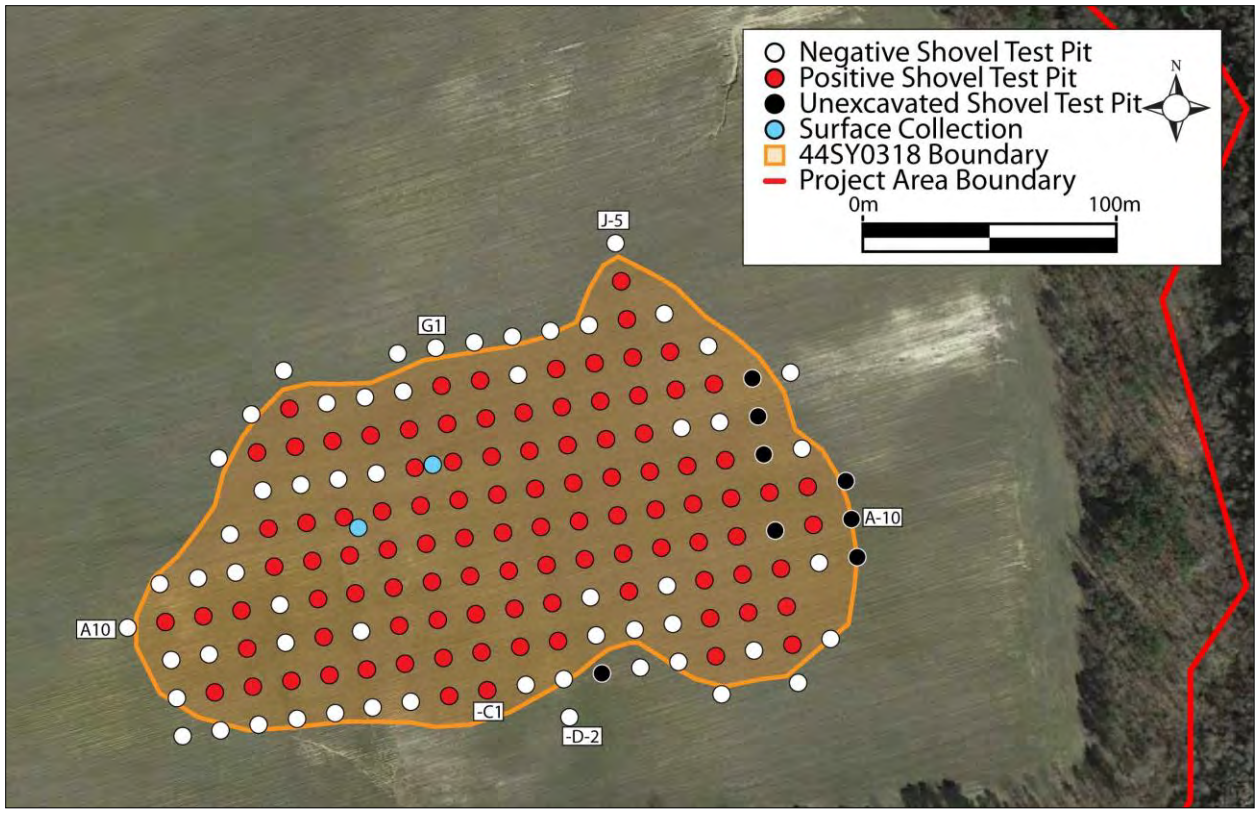


Figure 7-119: Aerial view of Grid C5.

Soils in this grid consisted of 10YR 4/3 dark brown sandy loam plowzone (Ap horizon) over a mottled and somewhat disturbed transition layer of 10YR 6/4 light yellowish brown sandy loam over subsoil (B horizon) of 10YR 5/8 yellowish brown sandy clay (Figure 7-120). Subsurface features were also noted in the site: these are detailed in the site description, below.

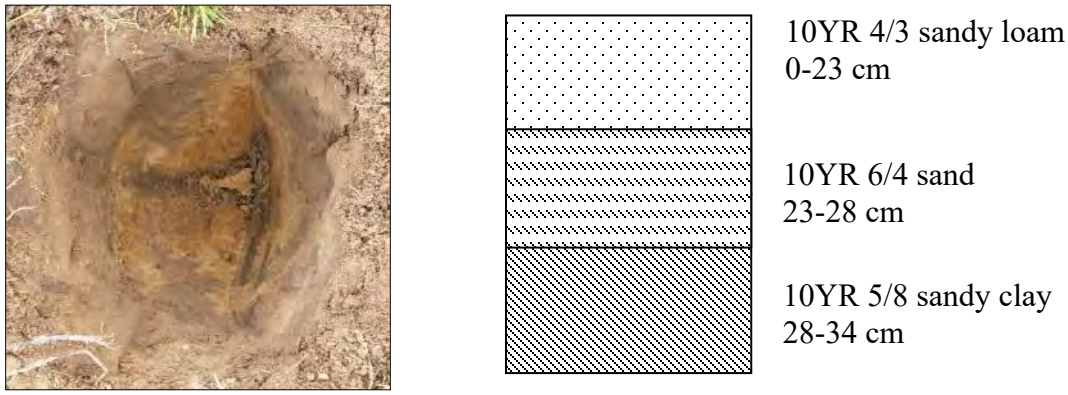


Figure 7-120: Soil profile of Shovel Test D3, typical of soils in Grid C5.

44SY0318

This site consists of a dense concentration of artifacts in the location of a structure depicted on a 1919 topographic map. Aerial imagery indicates that this structure was demolished and removed from the landscape at some point between 1994 and 2003. A difference in vegetation corresponds with both the highest concentration of artifacts within the agricultural field and with the location

of the structure visible on the aerials. However, it appears that most of the structural materials were pushed into the woods at the southern edge of the field: a long series pushpiles filled with architectural debris and farm machinery were noted inside the treeline (Figure 7-121).

Figure 7-121: Coursed brick and mortar in pushpile.

Artifacts consisted of brick, most of which was not collected; mortar (N=15); unidentifiable nails (N=73); iron fragments (N=62); window glass (N=53); porcelaneous tile (N=4); vessel glass (N=108), including amber, aqua, brown, cobalt, colorless, dark green, and solarized glass; ceramics (N=21), including ironstone, hard paste porcelain, whiteware, green transferware, pearlware, and edgeware; copper alloy pipe; and a copper alloy clock gear (Figure 7-122).

Figure 7-122: Artifacts recovered from 44SY0318.

Soils over the original location of the structure exhibited a layer of cultural fill that may be related either to the occupation or the demolition of the house. This stratigraphy consisted of a fill layer of 2.5Y dark olive brown sandy loam with brick inclusions interspersed with 10YR 5/6 yellowish brown sandy clay and charcoal over a transition layer of 10YR 4/3 dark brown sandy loam over 10YR 6/4 light yellowish brown sandy clay subsoil (Figure 7-123).

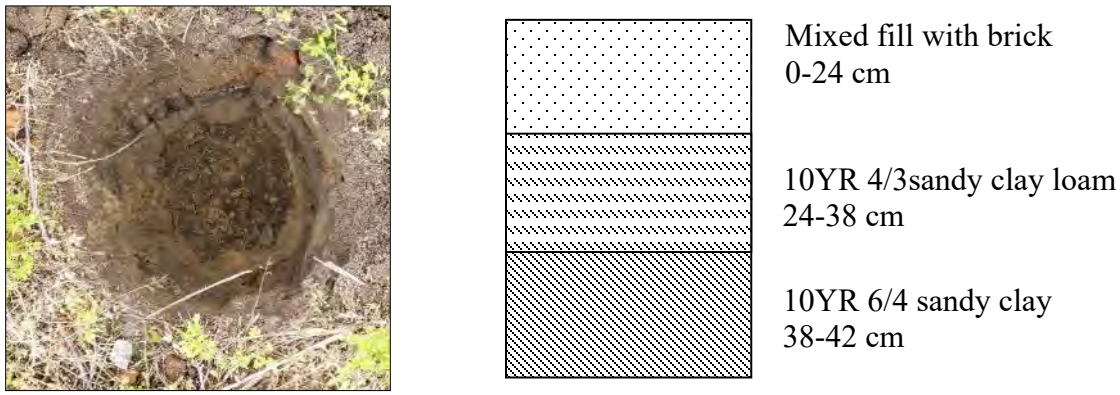


Figure 7-123: Soil profile of Shovel Test D2, showing fill layer.

Due to the disturbed nature of the deposits and the late date of the materials, this site possesses little potential to provide new or significant archaeological data. It is therefore recommended not eligible for inclusion in the NRHP, and no further consideration is warranted.

GRID C10

This grid was placed on a large square terrace overlooking Mill Swamp, directly across a drainage from Grid C5. Subsurface testing was conducted here because, although this portion of Area C had

low potential for archaeological resources overall, this area exhibited somewhat better site-predictive factors, due to its position at the edge of the swamp. Vegetation in Grid C10 consisted of young pines with an undergrowth of hardwood saplings and hollies (Figure 7-124).

Figure 7-124: Overview of Grid C10, facing west.

A total of 40 shovel tests were placed in this location, two of which could not be excavated due to disturbance (Figure 7-125).

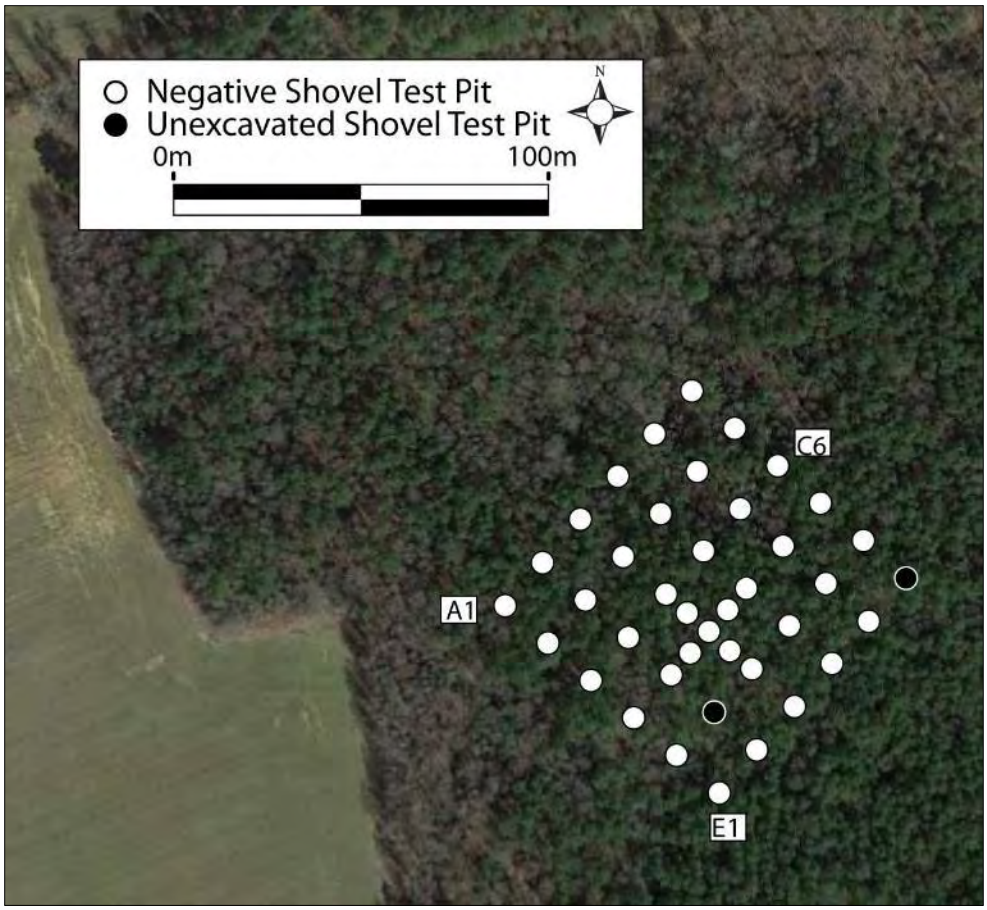


Figure 7-125: Aerial view of subsurface testing in Grid C10.

Soils in this grid consisted of 2.5Y 6/3 light yellowish brown sandy loam topsoil (A horizon) over 2.5Y 6/4 light yellowish brown sandy clay subsoil (B horizon). Soils were compact and shallow, suggesting disturbance from logging (Figure 7-126).

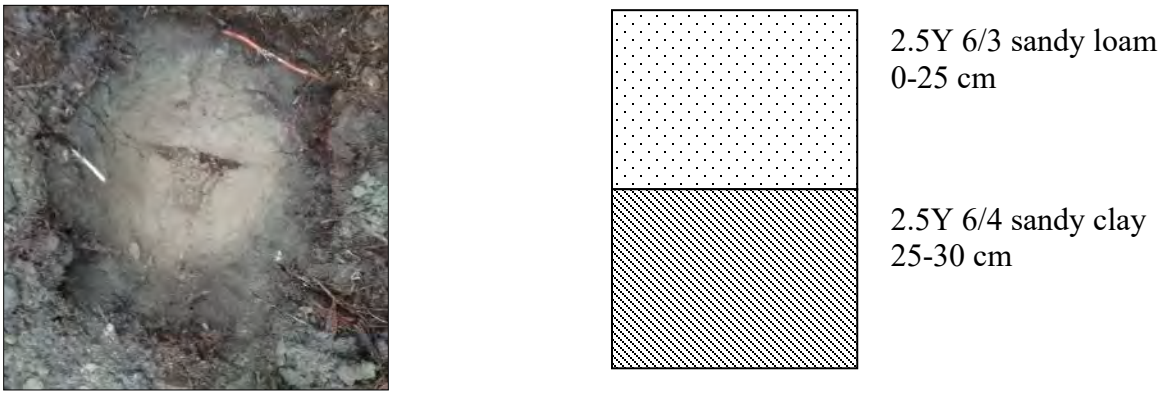


Figure 7-126: Soil profile of Shovel Test E3, typical of soils in Grid C10.

GRID C11

This grid was placed to the west of Grids C5 and C10 along the north side of a deep drainage ditch. Subsurface testing was conducted here because a structure was marked on the 1974 topographic map. As in most of Area C, vegetation consisted of a large fallow peanut field (Figure 7-127).

Figure 7-127: Overview of Grid C11, facing east from Shovel Test C2.

Only two transects were placed here for a total of eight shovel tests. No artifacts or features were noted (Figure 7-128).

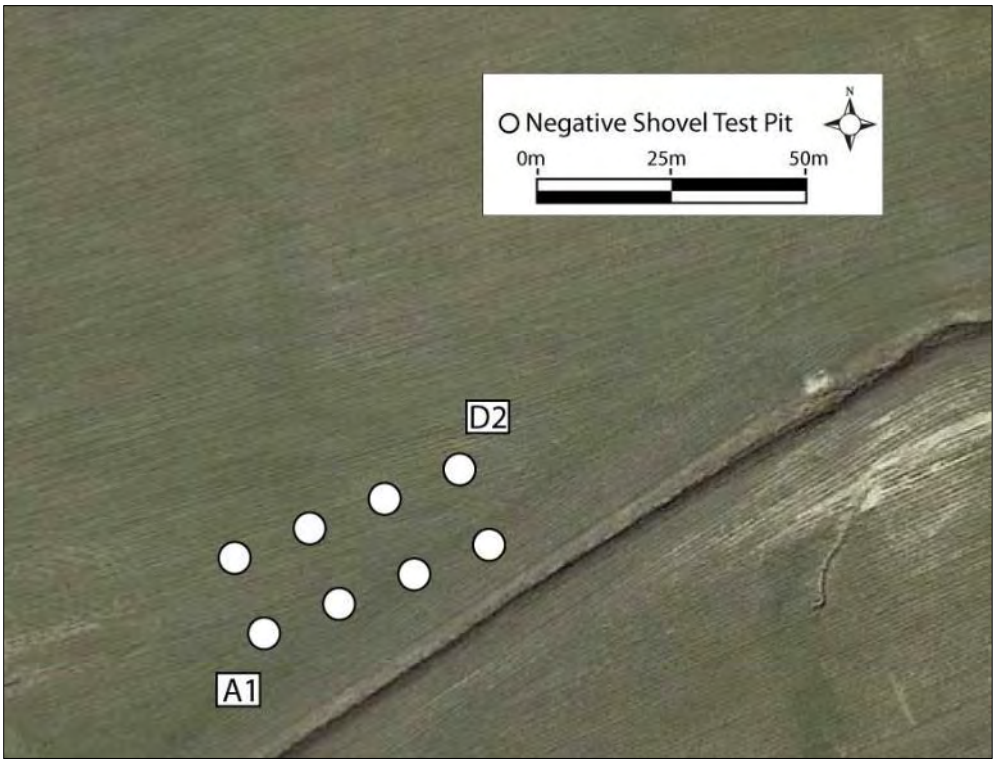


Figure 7-128: Aerial view of subsurface testing in Grid C11.

Soils consisted of a 2.5Y 4/3 olive brown sandy loam plowzone (Ap horizon) over 2.5Y 5/6 light olive brown sandy clay subsoil (B horizon) (Figure 7-129).

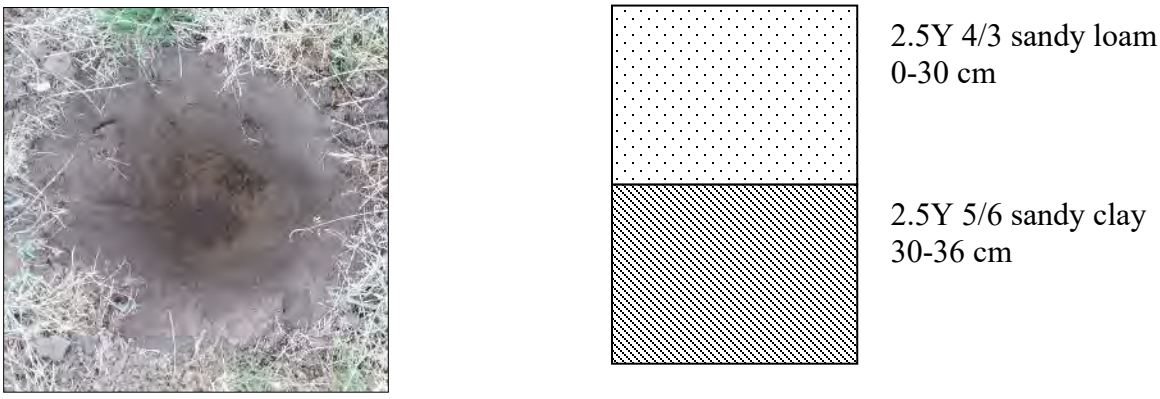


Figure 7-129: Soil profile of Shovel Test C2, typical of Area C11.

GRID C9

This grid was placed in the southern end of the large peanut field near the southeastern property boundary (Figure 7-130). A structure was depicted in this area on the 1919 topographic map.

Figure 7-130: Overview of Grid C9, facing north.

Ground visibility was good enough to allow for systematic pedestrian survey rather than subsurface testing, so an area covering about 2.3 hectares (5.8 acres) was walked in transects spaced at 15-meter (50-foot) intervals (Figure 7-131).

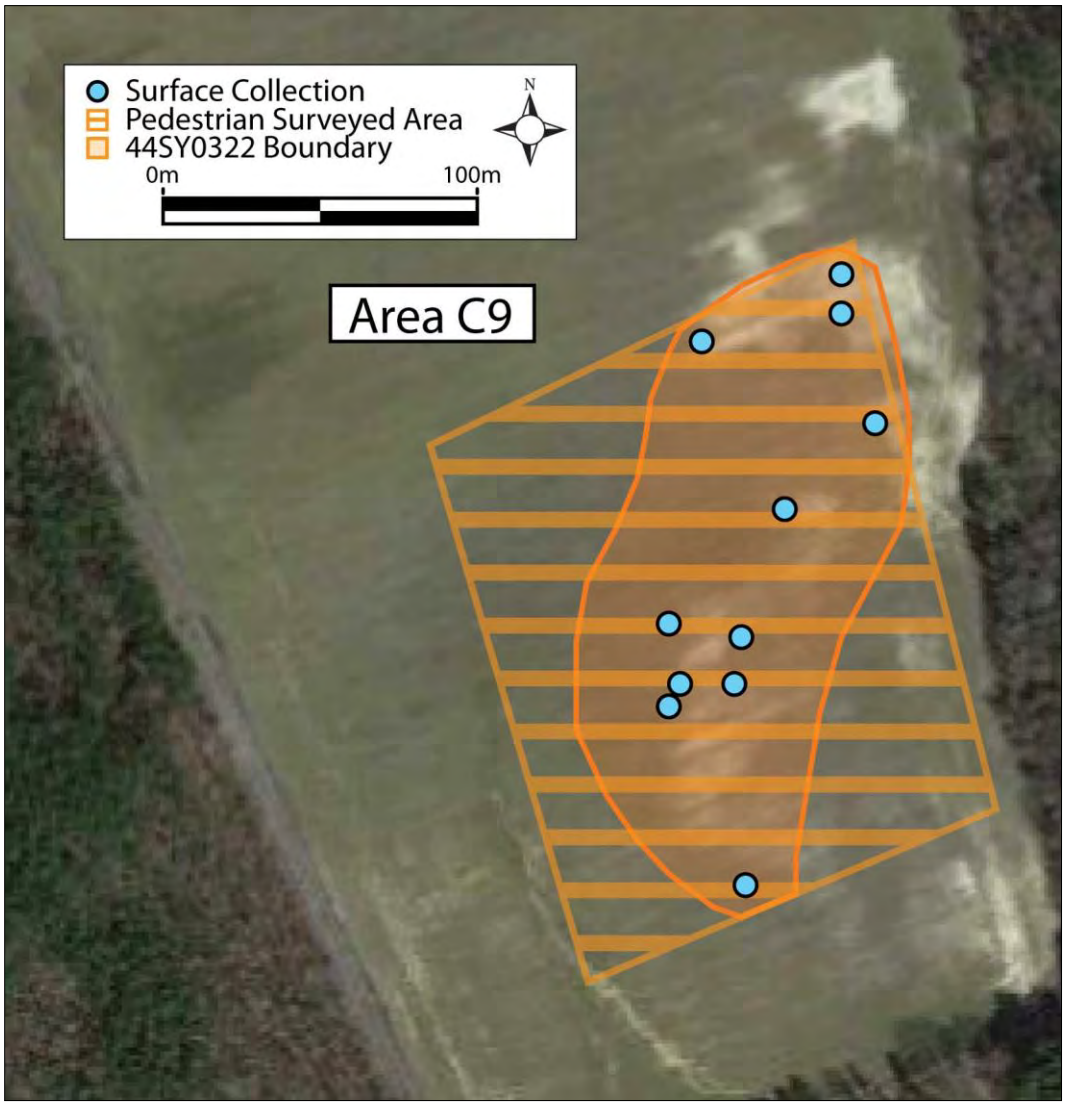


Figure 7-131: Aerial view of area pedestrian surveyed in Grid C9.

44SY0322

This site covered most of the pedestrian survey grid. It is a multicomponent site consisting of a few prehistoric artifacts near the end of the landform and a wide scatter of late-nineteenth and early twentieth century material, including architectural and domestic artifacts. Only a representative sample of material was collected. Historic artifacts included a milk glass lid liner, a cobalt glass Vaporub jar, a porcelain doll arm, a 1946 penny, and ironstone with a maker's mark dating to 1922-1938 (Figure 7-132). An isolated kaolin pipe stem was recovered, but no other early historic artifacts were noted. Prehistoric artifacts included a Halifax projectile point, the tip of a point, and lithic debitage. No other diagnostic materials were noted, and most of the few fragments of debitage were collected.

Figure 7-132: Representative artifacts recovered from Grid C9.

The historic component of this site is recommended not eligible for the NRHP due to the mid-twentieth century date of its materials. The prehistoric component of this site is recommended not eligible for the NRHP due to the small quantity of materials recovered.

GRID C2

This grid was placed in the far southwestern corner of the property, where a structure was depicted on the 1919 map. A dwelling and two outbuildings were still standing: they are described in the architectural volume of this report.

Terrain consists of a small finger ridge overlooking a draw. Vegetation at the time of survey consisted of mature hardwood forest (Figure 7-133; 7-134).

Figure 7-133: Overview of house site, facing east.

Figure 7-134: Collapsed outhouse, with typical vegetation, facing east.

A total of 54 shovel tests were laid out in Grid C2, four of which could not be excavated due to disturbance (Figure 7-135). Ten shovel tests contained twentieth-century artifacts: this concentration was designated 44SY0317, and it is described in detail below.

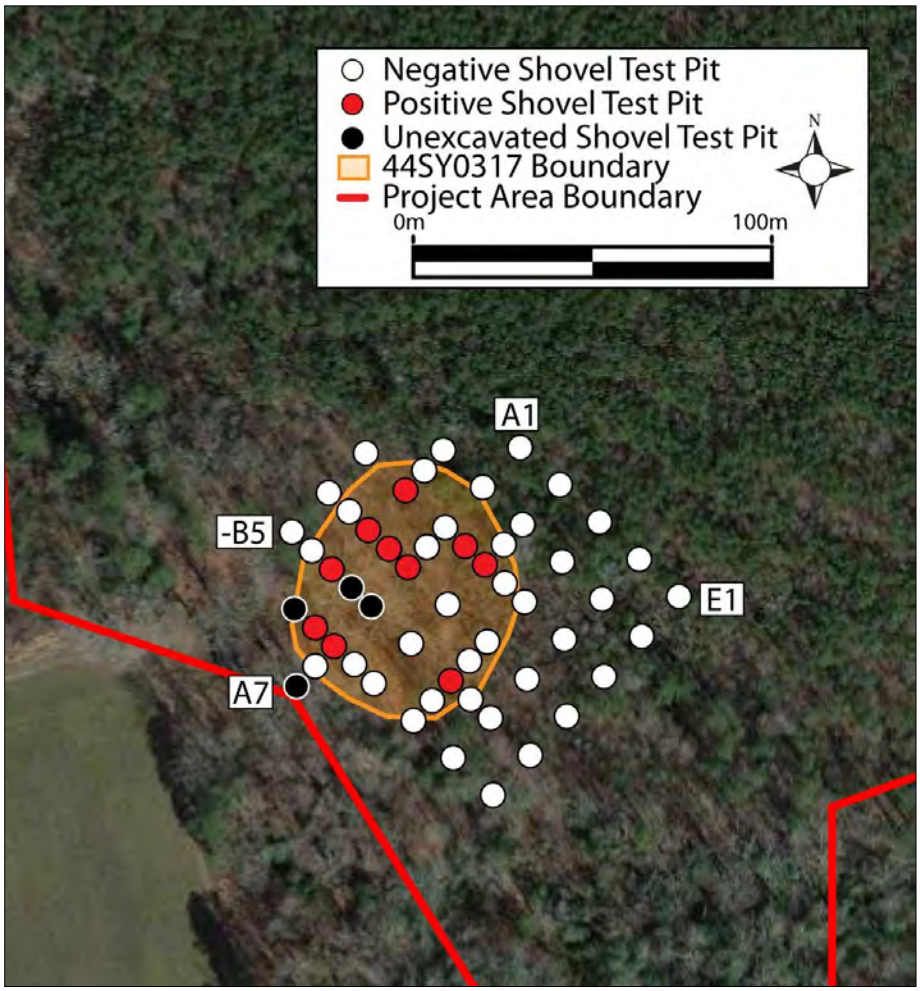


Figure 7-135: Aerial view of subsurface testing in Grid C2.

Soils consisted of 2.5Y 6/4 light yellowish brown sandy clay topsoil (A horizon) over 2.5Y 5/3 light olive brown subsoil (B horizon) (Figure 7-136).

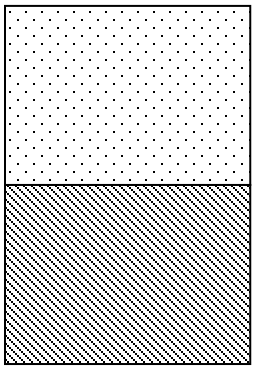


Figure 7-136: Soil profile of Shovel Test B4.

44SY0317

This site consists of a scatter of early-to-mid twentieth century materials associated with the house and outbuildings (Figure 7-137). Artifacts included brick fragments (N=2); wire and unidentifiable nails (N=5); window glass (N=2); vessel glass (N=10), including brown, colorless and solarized, with brown bottles and a milk bottle; ceramics (N=7), including ironstone, porcelaneous, and gray saltglazed stoneware; a steel mesh fragment, and synthetic material (N=1).

Figure 7-137: Representative artifacts recovered from 44SY0317.

Due to the small number of late-dating artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

AREA C6

This area is located north of Grid C2, and it is bounded on the north and west sides by the property line. A structure is depicted on the 1919 map in this area. Vegetation consisted of young mixed hardwood and coniferous forest: the area had been logged around 2007, according to satellite imagery (Figure 7-138). Ruts and pushpiles provided evidence of logging disturbance.

Figure 7-138: Overview of vegetation in Area C6, facing west.

A total of 59 shovel tests were laid out in Grid C6, 15 of which contained late-nineteenth through early-twentieth century cultural material (Figure 7-139). This concentration of artifacts was designated 44SY0319, and it is described in detail below.

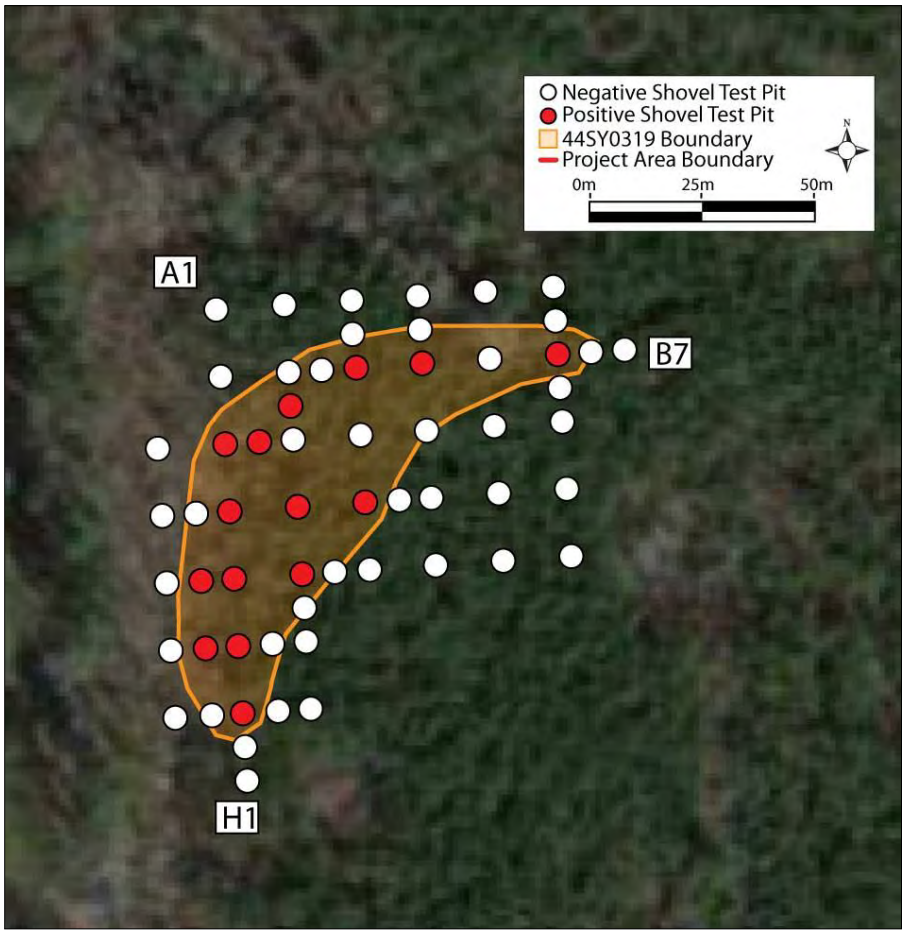
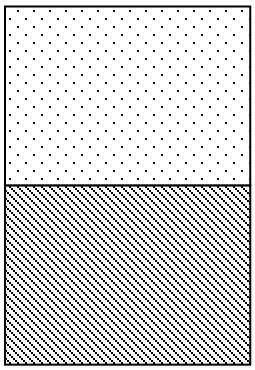


Figure 7-139: Aerial view of subsurface testing in Grid C6.

Soils were disturbed by logging and consisted of 2.5Y 5/4 light olive brown sandy clay loam topsoil (A horizon) mixed with logging debris over 2.5Y 5/6 light olive brown sandy clay loam subsoil (B horizon) (Figure 7-140).



2.5Y 5/4 sandy clay
0-25 cm

2.5Y 5/6 sandy clay
25-35 cm

Figure 7-140: Soil profile of Shovel Test C3, representative of Grid C6.

44SY0319

This site is a scatter of late-nineteenth through early-twentieth century artifacts that corresponds with a structure depicted on the 1919 map. No surface or subsurface features were noted. Artifacts consisted of brick fragments (N=5); nails, both wrought and machine cut (N=5); iron fragments (N=3); window glass (N=2); vessel glass (N=22), including amber, aqua, colorless, bright blue, opalescent, and solarized glass; and ceramics (N=7), mostly whiteware and ironstone (Figure 7-141).

Figure 7-141: Representative artifacts recovered from 44SY0319.

Due to the level of disturbance, the late date of the materials, and the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

AREA D

Area D lies on a set of noncontiguous parcels to the west of Area A and B, and to the northeast of Area C. It is bounded to the north and west by undeveloped timberland, on the east by agricultural fields which lie off of Route 625 (Pons Road), and on the south by a mix of undeveloped timberland and agricultural fields. The area is bisected by Route 624 (Mullet Drive), which is not only a modern road currently used by local residents and farmers, but also a historic route for the county which leads almost directly to two structures identified on an archival 1919 map of the county (Figure 7-142). The remains of both of these structures, as well as their associated cemeteries, were identified during field survey and will be discussed in detail below. Small farm roads allow for access within the area boundaries. Route 624 also forms the western boundary to a disconnected portion of Area D, which lies approximately 250 yards south of the primary section, and consists of mature pine trees grown for lumber, some of which have been timbered recently.

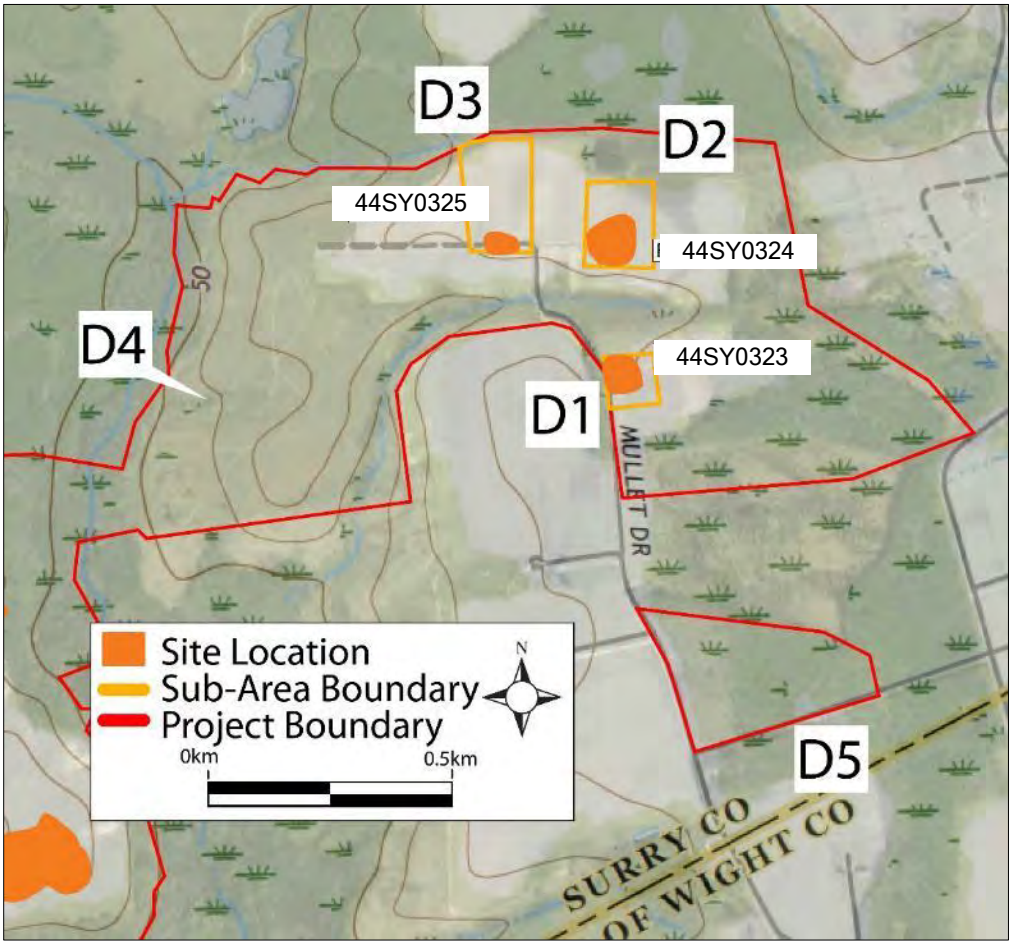


Figure 7-142: Location of sub-areas in Area D.

Currently the land is used primarily for agricultural purposes, with corn and soybeans in particular being grown in abundance (Figure 7-143). The disconnected southern parcel as well as the section to the far west of the primary portion have been used as timber farms, however the sporadic growth patterns of the young pines currently present indicate that there has been some degree of lapse in this usage in recent years. Despite this reprieve, the soils here exhibit the marks of many years of heavy logging disturbance, and stratigraphic integrity is extremely poor. However, in the central agricultural fields where only plowing has occurred, many artifacts have been brought up to the surface through farming activities, and subsurface soil profiles are considered to be primarily intact.

Figure 7-143: Typical vegetation and terrain in Area D. View of Area D2 with crew in foreground, Facing east from farm road in Area D3.

While no structures or surface features survive in this area, four copses of trees are of particular interest. Two are located at the projected locations of the historic structures noted on the 1919 aerial map, however no architectural evidence remains standing. The other two copses of trees are in the northern field in area D and were identified as likely cemeteries. These four sites are discussed in further detail below.

AREA D1

Area D1 lies in the southeast side of the primary portion of Area D, encompassing the plowed field that lies to the east of Route 624. The 1919 topographic map shows a structure in this location which, while no longer standing, has its former site visibly marked by a copse of trees with large push piles surrounding its base. A local farmer informed field crews that an old house once stood there, but he had cleaned up the bulk of the debris after the structure fell in on itself a number of years ago (Figure 7-144; 145). Historic artifacts, likely associated with the house or with adjacent farming operations both concurrent and subsequent, were identified in the push piles and in the field surrounding the main foundation site. These materials were designated 44SY0323, which is described in detail below.

Figure 7-144: Typical vegetation and terrain in Area D1, with house site in center. Facing northeast.

Figure 7-145: Coursed brick associated with house site. Likely a field edge or path denotation.

At the time of survey, this field had been recently replanted with corn, allowing for excellent ground surface visibility. Because of the good ground visibility, systematic pedestrian survey was performed in transects spaced 15 meters (50 feet) apart over the house site. An area measuring

approximately 1 hectare (2.48 acres) was pedestrian surveyed. No subsurface testing was performed in this area (Figure 7-146).

Figure 7-146: Aerial view of pedestrian survey grid in Area D1.

44SY0323

This site consists of a scatter of mid-nineteenth through twentieth century artifacts surrounding the remnants of the foundation of a recently demolished house. The concentration of artifacts covers about a half hectare (1.25 acres). Only a representative sample of artifacts were collected. These consisted of a solarized glass bottle lip, Bristol glazed and Albany slip stoneware, a molded pearlware handle, sponge-decorated whiteware, and oyster shell (Figure 7-147).

Figure 7-147: Representative artifacts from 44SY0323.

Due to the disturbance caused by the recent demolition and removal of the structure, this site lacks stratigraphic integrity. Therefore, it possesses little potential to provide new or significant archaeological data and is recommended not eligible for inclusion in the NRHP.

AREA D2

Area D2 lies in the northeast of the primary portion of Area D. This area is easily accessed by Route 624, which is shown leading to a structure in this area on the 1919 map. Pushpiles and a copse of trees in the projected house location suggest that, as in Area D1, this structure was demolished and cleared away (Figure 7-148). This field had also been recently replanted with corn, resulting in excellent ground surface visibility (Figure 7-149).

Figure 7-148: House Site in Area D2, facing Northwest.

Figure 7-149: Typical Vegetation and terrain in Area D. Overview of area D2, facing east.

Due to the good ground visibility, a systematic pedestrian survey was conducted over the structure location. Historic artifacts were identified both in the disturbed push piles and in the surrounding fields (Figure 7-150). This concentration of historic material was designated 44SY0324 and is described in detail below. One shovel test pit was excavated in this area in order to observe soil stratigraphy.

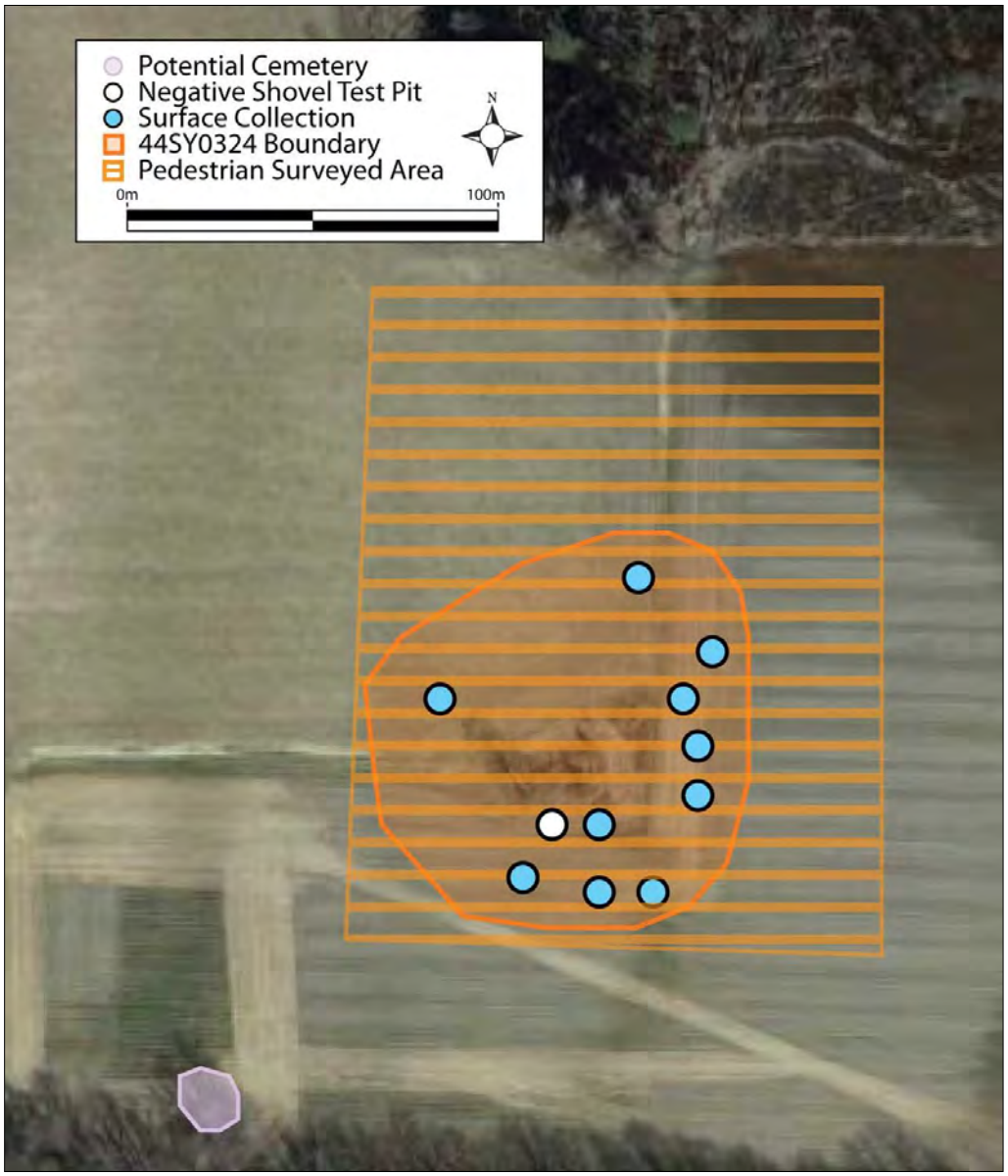


Figure 7-150: Aerial view of subsurface testing in Area D2.

In addition to the demolished structure site, a second copse of trees near the southern boundary of Area D2 was identified as having potential historic interest. This stand of trees has all the typical landscape markings of a historic cemetery and features a circle of mature trees approximately 20 meters in diameter with a broad clearing free of underbrush between them (Figure 7-151; 1-152). However, no headstones, depressions, fieldstones, or fence were observed. The plowed agricultural field stops just outside the tree line, indicating that this area has been intentionally avoided during plowing. Local informants identified this copse of trees as a cemetery, but no other

supporting information was available. While this area is not marked on any historic map as a cemetery it is recommended that it be avoided until further monitoring and delineation of any potential graves can take place.

Figure 7-151: Copse of trees surrounding potential cemetery. Facing east.

Figure 7-152: Interior of copse of trees showing clearing of potential cemetery. Facing north-northeast.

Soils in Area D2 were entirely within the agricultural field, and the stratigraphy reflected that with a two stratum profile of plowzone over subsoil. Stratigraphy consisted of a 10YR 5/3 brown sandy loam plowzone (Ap horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon). Subsoil was very compact and appeared to be undisturbed (Figure 7-153).

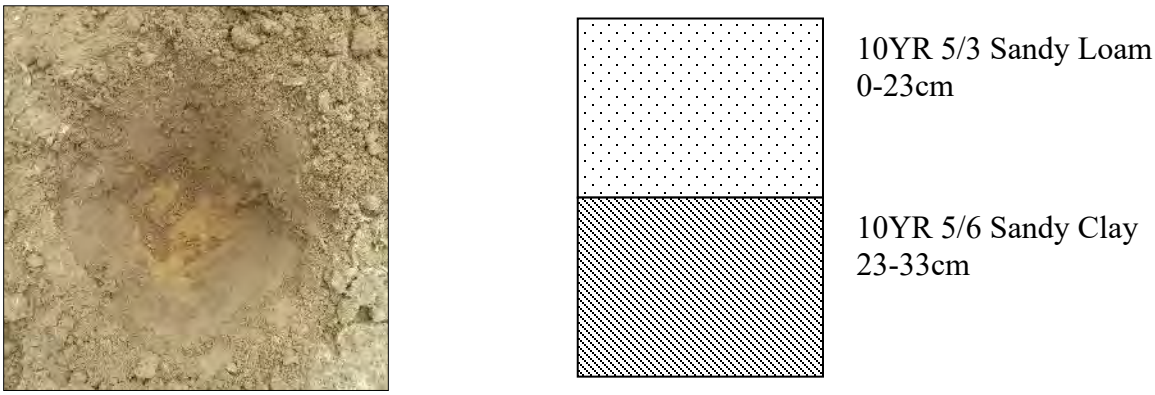


Figure 7-153: Soil profile of Judgmental 1

44SY0324

This is a late-nineteenth through early-twentieth century domestic site that corresponds with a structure depicted on the 1919 topographic map. Pushpiles and architectural debris indicate that this structure was demolished and removed from the landscape relatively recently. Only a representative sample of material was collected. Artifacts consisted of vessel glass (N=8),

including aqua, bright blue, light blue, and milk glass, Knox Bottle Company glass with a date range of 1932-1968, and a post-1915 Owens-Illinois bottle; porcelain electric insulators (N=2); whiteware (N=4), including flow blue, molded, handpainted polychrome, and shell edge; porcelain (N=1); and stoneware (N=4) (Figure 7-154).

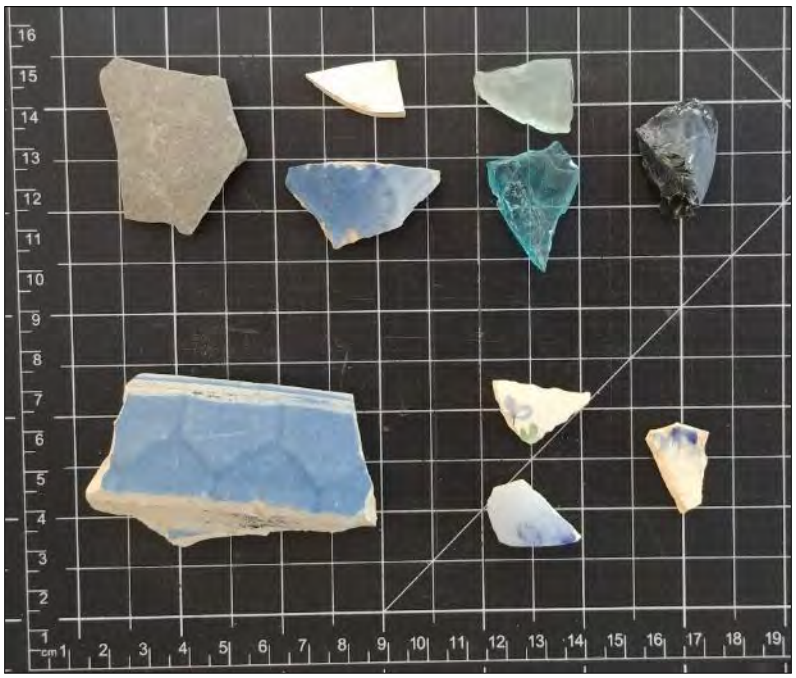


Figure 7-154: Representative artifacts from 44SY0324.

Due to the disturbance caused by the recent demolition and removal of the structure, this site lacks stratigraphic integrity. Additionally, the artifacts recovered date to the early twentieth century. Therefore, it possesses little potential to provide new or significant archaeological data and is recommended not eligible for inclusion in the NRHP.

AREA D3

Area D3 lies in the northwest of Area D, entirely within the agricultural fields at the terminus of Route 624. This area, like areas D1 and D2, is currently used as an agricultural field, growing predominantly corn, and at the time of survey had only just been planted, allowing for excellent ground surface visibility (Figure 7-155). A systematic pedestrian survey was carried out over the central portion of the field, where the 1919 aerial of the county had a historic structure marked, though no surface indication of it remains (Figure 7-156). Historic artifacts were discovered scattered across the surface of the field, primarily clustered near the farm road that extends from the end of Route 624. Even when taking into account the possibility of displacement by the plow over years of farming, such a tightly spaced cluster suggests this was the former location of a potential structure. A single judgmental shovel test was excavated near this cluster to observe subsurface integrity, which is discussed below.

Figure 7-155: Typical vegetation and terrain in Area D3. Facing East.

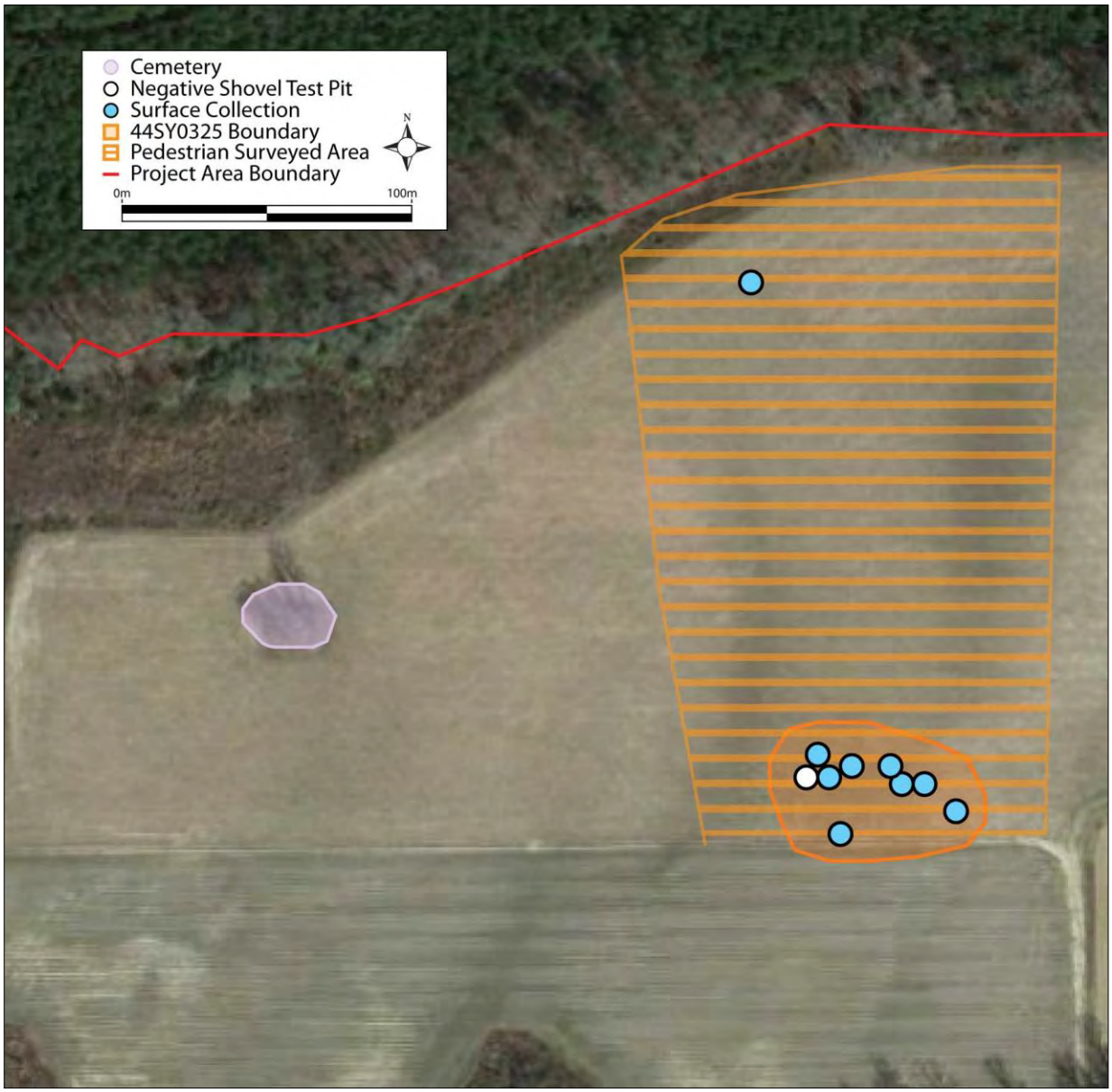


Figure 7-156: Aerial view of pedestrian survey in Area D3.

While no surface indications of a structure in Area D3 are present, a stand of trees in the western third is of special interest. This location is marked on 1968 and 1986 aerials of the county as being the location of a cemetery, though it is absent in all previous and subsequent maps. During field survey this area was examined with particular attention; however, no depressions, grave markers, or fieldstones were identified to indicate the presence of graves. Vegetation at the base of the stand of trees was thick, but showed no signs of a fence or other barrier to delineate an edge to the area (Figure 7-157; 1-158). It is still possible that this area is a cemetery as is noted on the historic maps with all markers having been removed or destroyed, and it should be avoided until further monitoring or delineation can be performed.

Figure 7-157: Copse of trees surrounding previously recorded cemetery. Facing north.

Figure 7-158: Interior of copse of trees showing vegetation and major ground cover.

One judgmental shovel test pit was excavated near the dense cluster of artifacts on the southern boundary of Area D3. Like the previous two sub sections in Area D, this segment is made up of farmland, and exhibits a plow zone over subsoil soil matrix, however the transition layer in this area substantial transition layer between them. Stratigraphy consisted of a 10YR 5/3 brown sandy clay loam plow zone (Ap horizon) with a 10YR 6/4 light yellow brown sand transition layer (ApB Horizon) overtop of a 10YR 5/8 yellow brown sandy clay subsoil (B horizon) (Figure 7-159).

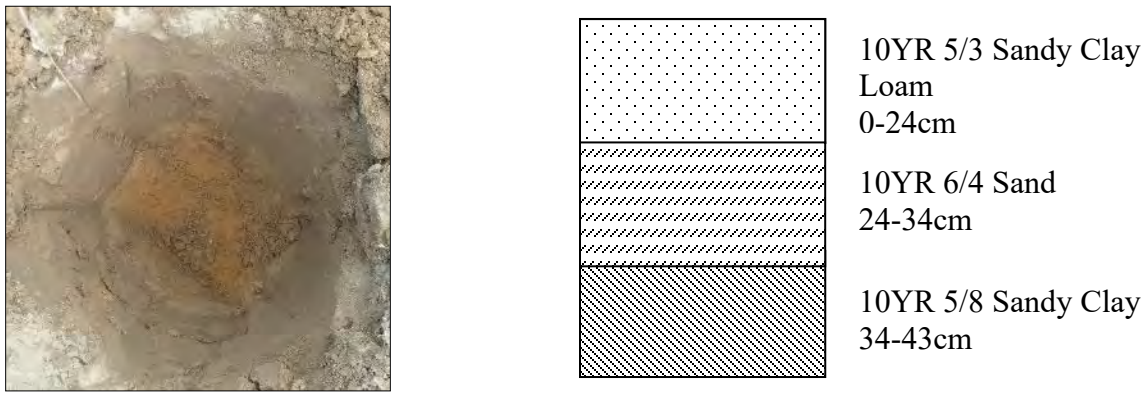


Figure 7-159: Soil profile of Judgmental 1

44SY0325

This turn of the twentieth century dwelling site is depicted on the 1919 map of the area, and it appears to have been cleared from the landscape relatively recently. Only a representative sample of surface artifacts were collected (Figure 7-160). These materials were typical of a late-nineteenth through early-twentieth century domestic site. Artifacts collected included vessel glass, including bright blue bottle glass with molded decoration, colorless molded glass, cobalt glass, dark green bottle, and milk glass; window glass; a Prosser buttons (N=1); ceramics (N=7, including whiteware, Bristol glazed stoneware, porcelain, and alkaline stoneware).

Figure 7-160: Representative artifacts from 44SY0325.

Due to the disturbance caused by the recent demolition and removal of the structure, this site lacks stratigraphic integrity. Therefore, it possesses little potential to provide new or significant archaeological data and is recommended not eligible for inclusion in the NRHP.

AREA D4

Area D4 differs greatly from the areas discussed thus far, as it is an area which has been heavily timbered, resulting in a wide gently sloping area with a central drainage, covered with young pine trees and dense undergrowth (Figure 7-161). It appears that after the most recent timbering took place the land was allowed to regrow without direction, and unbridled vegetation now marks the area. No historic aerials of the county identify structures in this area and historic logging operations have disturbed and deflated the soils here making this area be considered to have a low potential for historic or prehistoric resources and minimal remaining historic integrity. No subsurface testing was deemed necessary (Figure 7-162).

Figure 7-161: Typical vegetation and terrain in area D4. Facing West from center of area.

Figure 7-162: Aerial view of Area D4.

AREA D5

Area D5 is separated from the main section of Area D and lies to the south along the eastern side of Route 624. Like Area D4, this area has been timbered, but not enough time has elapsed since the timbering for the area to regrow in any substantial way. Large piles of slash and debris have been left on the ground throughout the area, and the easy access from Route 624 has allowed for a fair amount of dumping of modern garbage in the eastern portion (Figure 7-163). When moving towards the west, crews observed that soils had been heavily disturbed by timbering operations, and had little historic integrity remaining. As the historic aerials for the county showed no structures on this parcel, and the various disturbances had heavily impacted any remaining historic or prehistoric integrity, no subsurface testing was performed. The surface was surveyed for any aboveground features or surface artifacts, but none were identified (Figure 7-164).

Figure 7-163: Typical vegetation and terrain in Area D5. Facing South from center of area.

Figure 7-164: Aerial view of Area D5.

AREA E

This area consists of a separate group of parcels located on the far eastern side of the project east of Area A. It is mostly situated east of Burwells Bay Road, except for a small spur on the west side of the road that connects that group of parcels to Area A. It is bounded to the south by Mill Swamp Road, and on the northern side by an unnamed farm road (Figure 7-165). Two transmission line rights-of-way cross through the area, a larger one running east-west through the southern half, and a smaller one running north-south through the western half (Figure 7-166). Access into the area is poor, consisting only of a rough logging road connecting the property to Mill Swamp Road.

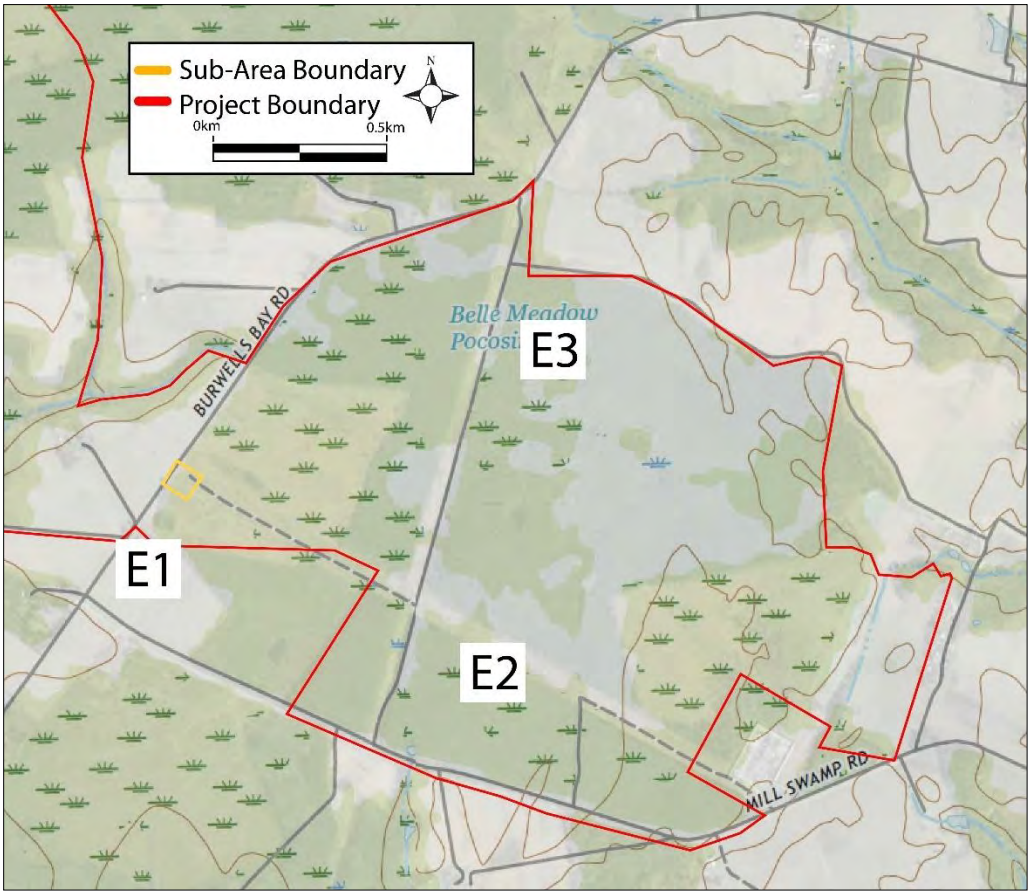


Figure 7-165: Topographic map of Area E with sub-areas.

Figure 7-166: Transmission line ROW, facing north.

Terrain across the entire area east of the road consists of low-lying, swampy pocosin, and the area lies within Belle Meadow Pocosin. Vegetation at the time of survey consisted of stands of managed timber in varying stages of harvest and regrowth with an understory of pocosin shrubs such as switch cane, inkberry, and Carolina laurel (Figure 7-167).

Figure 7-167: Dense switch cane, typical of Area E

Three structures are depicted on the 1919 map, but vegetation and terrain made access difficult. A grid could only be placed in the area along Burwells Bay Road.

Grid E1

This grid was placed in the projected location of a structure depicted on the 1919 topographic map. Vegetation consisted of briars, grasses, and other scrubby vegetation that had grown up after the area was clearcut in 2016 (Figure 7-168). The projected site location sits within the transmission line corridor. Visible ruts provided evidence for logging disturbance.

Figure 7-168: Vegetation and terrain in Grid E1, facing east.

A grid of thirteen shovel tests was placed over the projected location of the structure (Figure 7-169). One shovel test contained cultural material, and two shovel tests could not be excavated due to disturbance.

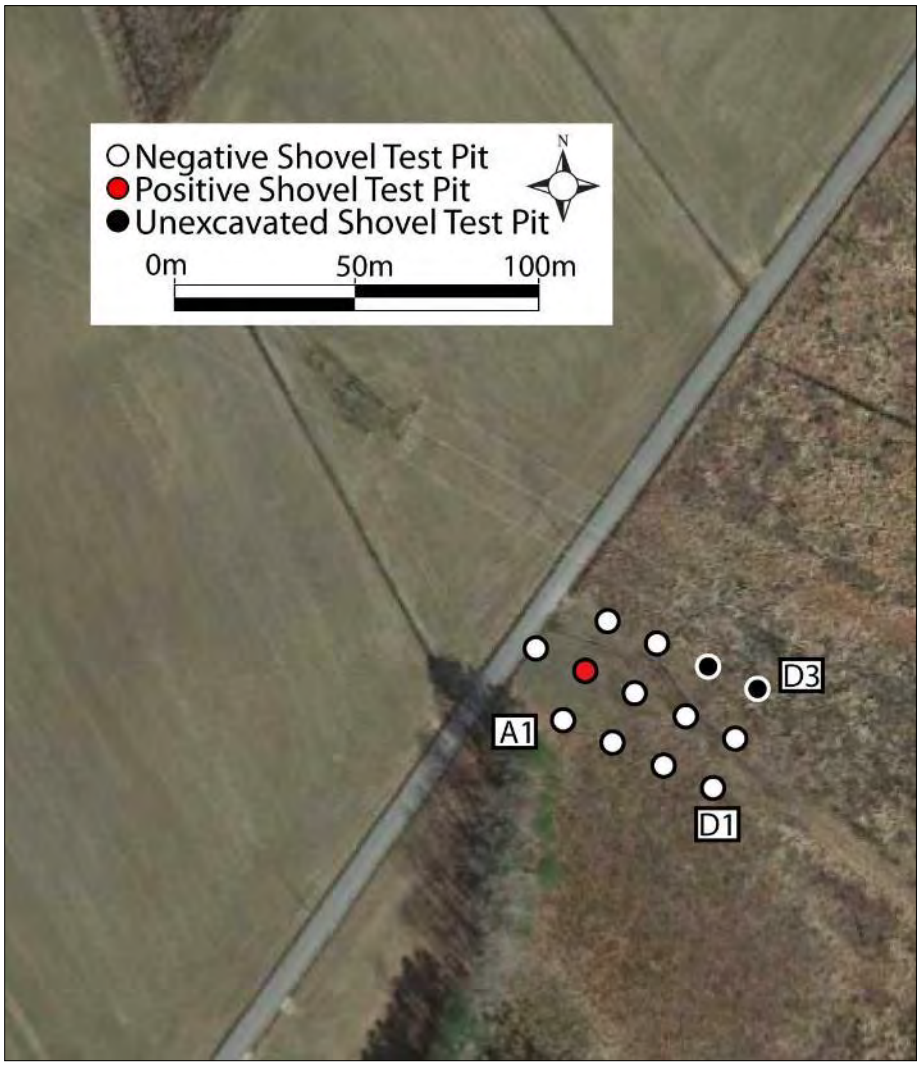


Figure 7-169: Aerial view of subsurface testing in Area E1.

Soils were disturbed by logging. A typical soil profile consisted of 10YR 5/2 grayish brown silty loam topsoil (A horizon) over 10YR 6/3 pale brown clay subsoil (B horizon) (Figure 7-170).

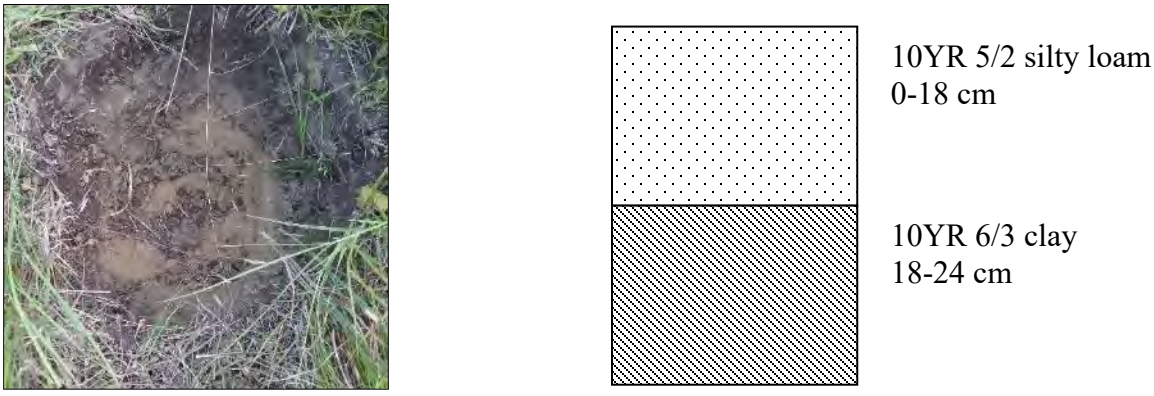


Figure 7-170: Soil profile of Shovel Test C2, typical of Area E1 soils.

GRID E2 AND E3

These two areas are located in the middle of a pocosin that had been previously logged. Vegetation in both grids consisted of young planted pines interspersed with dense thickets of switch cane. Logging disturbance was visible in both areas but was noticeably worse in Grid E2 (Figure 7-171; 7-172).

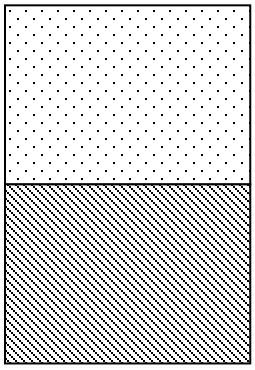
Figure 7-171: Planted pines and disturbed ground in Grid E2, facing east.

Figure 7-172: Vegetation in Grid E3, facing south.

Due to the logging disturbance, the dense vegetation, and the hydric soils, systematic subsurface testing could not be conducted. The projected locations of each 1919 structure were examined, and no evidence of either structure was observed. A judgmental shovel tests was excavated in each projected structure location to illustrate the disturbed and hydric soils (Figure 7-173).

Figure 7-173: Aerial view of E2 and E3.

Both shovel tests were the same, consisted of a disturbed 10YR 2/2 very dark brown silty loam topsoil (A horizon) with an uneven transition to a hydric 10YR 6/2 light brownish gray silty clay subsoil (B horizon) (Figure 7-174).



10YR 2/2 silty loam
0-23 cm

10YR 6/2 clay
23-34 cm

Figure 7-174: Soil profile of Judgmental 1, Grid E2, typical of E2 and E3 soils.

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8. SUMMARY AND CONCLUSIONS

From February 12 through June 4, 2020, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey of the ±2,106.02-hectare (±5,204.1-acre) Cavalier Solar study area in Isle of Wight and Surry counties, Virginia. The effort included both architectural and archaeological survey to confirm the presence or absence of cultural resources, evaluate their potential eligibility for listing in the NRHP, and assess potential impacts to NRHP-eligible resources. The project area is located in Isle of Wight and Surry Counties and consists of multiple contiguous and noncontiguous parcels situated between Burwells Bay Road and White Marsh Road.

The architectural results are detailed in a separate volume of this report.

Archaeological survey was conducted according to an approved research design that consisted of a sampling strategy that targeted areas of high, medium, and low potential for archaeological sites. Pedestrian reconnaissance was conducted over every part of the study area that did not lie in wetland, and areas selected for systematic testing were either shovel tested at 15-meter (50-foot) intervals or pedestrian surveyed in transects at the same interval. A total of 1,759 shovel tests were excavated across the entire study area, and another 8.7 hectares (21.5 acres) were systematically pedestrian surveyed.

A total of 27 sites were identified during this survey. All but one of these were turn of the twentieth century domestic sites that correspond with structures depicted on the 1919 USGS topographic map. This map suggests that the area around the study area was a thriving rural community during this time period. Both the archaeological and historical data suggest that this increase in population was limited to the turn of the nineteenth century. Only three structures are depicted on the 1863 map, while the 1919 map shows the project area dotted with farmsteads and crossed by multiple roads.

The oldest site, VDHR# 44SY0310, consisted of a small scatter of late-eighteenth through late-nineteenth century domestic materials, a possible brick features, and a single grave dating to 1829. Although disturbance and dense vegetation prevented extensive testing in this area, the artifacts and grave suggest a long period of occupation. Due to presence of the grave and the early date of the materials, ***additional evaluation*** is recommended to determine the site's potential for eligibility for the NRHP. Avoidance or Phase II evaluation is recommended. ***Avoidance with a 100 foot buffer is recommended for the grave.*** If avoidance is not possible, delineation of the area around the grave to identify the limits of the burials is recommended.

All but one of the early-twentieth century sites are either badly disturbed by logging or other destructive activities, or they are too ephemeral to provide much data. These sites possess little potential to provide new or significant archaeological data, and they are recommended ***not eligible*** for inclusion in the NRHP. One of the early-twentieth century sites, VDHR# 44SY0309, sits in an agricultural field and is still relatively undisturbed. Its foundation is visible on the surface, and a dense scatter of late-nineteenth through early-twentieth century artifacts was recovered around it. As the best surviving example of a farmstead within this vanished community, this site is recommended ***potentially eligible*** for inclusion in the NRHP for its potential to provide significant data about life in this region during the turn of the twentieth century. ***D+A recommends avoidance.***

If avoidance is not possible, ***Phase II evaluation to determine the extent and integrity of the deposits is recommended.***

Recommendations for the cemeteries identified during this survey are included in the architectural field results volume. However, there are two possible cemeteries that were noted on maps or identified through oral history that did not receive site numbers due to their lack of surface features. These possible cemeteries are both located in Area D. The first consists of a small copse of trees at the edge of an agricultural field in Area D2. Although no depressions or grave markers were noted, is location at the edge of the field and the fact that the area had been intentionally avoided during plowing suggests a possible cemetery. Avoidance with a 100 foot buffer is recommended. If avoidance is not possible, further delineation to determine the nature of this landscape feature is recommended. The second potential cemetery is located in a similar setting in Area D3. This area is marked on late-twentieth century topographic maps as a cemetery, but no depressions or grave markers were noted. As with the other potential cemetery, ***D+A recommends avoidance with a 100 foot buffer or further delineation.***

Table 8-1: Sites identified during Phase I survey.

Site	Date	D+A Recommendation
44SY0309	Late 19th through Early 20th Century	Potentially Eligible
44SY0310	Early 19th century	Potentially Eligible
44SY0303	Late 19th through Early 20th Century	Not Eligible
44SY0304	Late 19th through Early 20th Century	Not Eligible
44SY0305	Late 19th through Early 20th Century	Not Eligible
44IW0316	Late 19th through Early 20th Century	Not Eligible
44SY0306	Late 19th through Early 20th Century	Not Eligible
44SY0307	Late 19th through Early 20th Century	Not Eligible
44SY0308	Late 19th through Early 20th Century	Not Eligible
44SY0311	Late 19th through Early 20th Century	Not Eligible
44SY0312	Late 19th through Early 20th Century	Not Eligible
44SY0313	Late 19th through Early 20th Century	Not Eligible
44SY0314	Late 19th through Early 20th Century	Not Eligible
44SY0315	Late 19th through Early 20th Century	Not Eligible
44IW0317	Late 19th through Early 20th Century	Not Eligible
44SY0316	Late 19th through Early 20th Century	Not Eligible
44SY0317	Late 19th through Early 20th Century	Not Eligible
44SY0318	Late 19th through Early 20th Century	Not Eligible
44SY0319	Late 19th through Early 20th Century	Not Eligible
44SY0320	Late 19th through Early 20th Century	Not Eligible
44SY0321	Late 19th through Early 20th Century	Not Eligible
44SY0322	Late 19th through Early 20th Century	Not Eligible
44SY0323	Late 19th through Early 20th Century	Not Eligible
44SY0324	Late 19th through Early 20th Century	Not Eligible
44SY0325	Late 19th through Early 20th Century	Not Eligible
44SY0326	Late 19th through Early 20th Century	Not Eligible

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APPENDIX A: RESUMES

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DAVID H. DUTTON
Managing Partner

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

Education

Master of Arts, 1990
Archaeological Studies
Boston University
Boston, Massachusetts

Bachelor of Science, 1986
Anthropology and Sociology
Virginia Commonwealth University
Richmond, Virginia

Appointments

Historic Advisory Committee, Woodrow Wilson Bridge Design Competition, 1998

Dept. of the Army Counterpart Regulations Task Force, NCSHPO, 1999

Virginia Department of Historic Resources Archaeology Advisory Group, 2000

Historic Preservation Committee Chesterfield County, Virginia 2011

Dominion Historic, Scenic, and Cultural Advisory Group, 2017

Mr. Dutton has over 25 years of professional historic preservation experience throughout the East Coast, with a focus on Section 106 coordination and review. He directed the Virginia Department of Historic Resources Division of Project Review where he managed all federal and state environmental reviews, rehabilitation tax credit project certification, historic preservation easements, covenants, and archaeological permits. Prior to his work at the state, Mr. Dutton served as a project review archaeologist for the President's Advisory Council on Historic Preservation. His geographic responsibility was the southeastern United States.

Mr. Dutton has managed the successful completion of multiple cultural resource projects for public and private clients including identification, evaluation, and data recovery efforts for archaeological and architectural properties, HABS documentation, Battlefield Cultural Heritage Plans, Interpretive Concept Plans, and Integrated Cultural Resource Management Plans (ICRMP). In addition, he has negotiated successful agreements under Section 106 for a wide variety of projects. Specific examples include a memorandum of agreement for the Dominion Surry-Skiffes-Whealton transmission line project and a programmatic agreement for the closure of Fort Monroe, a National Historic Landmark District.

Mr. Dutton brings clients both experience and expertise ensuring cultural resource requirements are successfully and efficiently integrated into project planning and construction.

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Dutton + Associates

DAVID H. DUTTON
Managing Partner

Professional Experience

Dutton + Associates, LLC, Managing Partner, Richmond, Virginia, 2005 – Present. Directs the firm's technical services which include review of projects pursuant to federal and state historic preservation regulations, cultural resource plan development, field investigations, laboratory processing and analyses, and report preparation.

American Civil War Center *at Historic Tredegar*, Chief Operating Officer, Richmond, Virginia, 2002 – 2006. Managed the Tredegar Iron Works site, the financial performance of the Foundation and construction of the Foundation's new exhibition facility and exhibit *In the Cause of Liberty*.

Cultural Resources Inc., President and Principal Investigator, Williamsburg, Virginia, 1999 – 2002. Managed the firm's financial and technical performance. Directed and authored several cultural resource management studies including identification, evaluation, and data recovery efforts.

Virginia Department of Historic Resources, Director, Division of Project Review; Richmond, Virginia, 1994-1999. Managed all federal and state review and compliance programs; generated policies, specifications, and standards; directed the state historic preservation easement program; interfaced with federal and state executives, elected officials, developers, architects, and engineers on project development and implementation; managed the review and certification of plans for federal and state rehabilitation tax credits; and commented on proposed federal and state legislation and regulations as well as on national and regional historic preservation issues.

Virginia Department of Historic Resources, Archaeologist Planner; Richmond, Virginia, 1992-1994. Planned, coordinated, and supervised the statewide program in archaeological preservation planning; developed and implemented historic preservation plans; and managed, monitored, and evaluated grantee performance for departmental grants awarded in preservation planning.

Advisory Council on Historic Preservation, Historic Preservation Specialist, Staff Archaeologist; Washington, D.C. 1989 – 1992. Reviewed federal projects under Section 106 of the National Historic Preservation Act for the southeast United States; consulted with Congressional offices, federal and state agencies, local governments, and members of the general public; developed and reviewed historic property management plans; and assisted in development of federal policy for the identification and treatment of historic property.

Example Projects and Publications

2007 Project Management of cultural resource team for King William Reservoir Archaeological Services Contract.

2008 Programmatic Agreement for the Closure of Fort Monroe and the Management of Historic Properties.

2017 Regulatory assistance for the Surry-Skiffes-Whealton Transmission Line Project, Surry and James City Counties and the City of Newport News.

2017 Regulatory assistance for the Atlantic Coast Pipeline project, North Carolina, Virginia, West Virginia, and Penssylvania.

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J. HOPE SMITH
PRINCIPAL INVESTIGATOR

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

Education

PhD, 2017
Anthropology
University of Tennessee
Knoxville, Tennessee

Bachelor of Arts, 2005
Historic Preservation
University of Mary Washington
Fredericksburg, Virginia

Memberships

Register of Professional Archaeologists

Society for Historical Archaeology

Hope Smith holds a PhD in Anthropology, concentrating in Historical Archaeology, from the University of Tennessee and a B.A. in Historic Preservation from the University of Mary Washington. Her area of focus is eighteenth and nineteenth-century Virginia, and her research interests include material culture studies, artifacts of personal adornment, and the intersection of race and gender in plantation archaeology. She has over 12 years of experience in archaeology and has participated in both historic and prehistoric projects at all levels of investigation.

Her experience in Cultural Resource Management includes supervising fieldwork, analyzing field and artifact data, and authoring reports.

Prior to working at Dutton + Associates, she was employed as a Teaching Associate at the University of Tennessee, where she taught archaeology field schools and courses in archaeology, including a course on Cultural Resource Management law and practice.

As a project archaeologist for Dutton + Associates, Dr. Smith collaborates on all aspects of archaeological work, including supervising field work, and authoring project reports.

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CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

J. HOPE SMITH
PRINCIPAL INVESTIGATOR

Professional Experience

Dutton+Associates, LLC, Project Archaeologist
Richmond, Virginia, 2017
Conducts archaeological investigations (Phase I, II, III and monitoring), prepares research designs, manages and directs archaeological field crew, analyzes artifacts, writes reports.

University of Tennessee, Knoxville, Graduate Teaching Associate
Knoxville, Tennessee, 2011-2017
Supervised fieldwork during two archaeological field schools; taught undergraduate-level archaeology courses.

James Madison's Montpelier Crew Chief
Montpelier Station, Virginia 2008-2011
Performed fieldwork and supervised students and interns in excavation and survey projects; drew maps and coauthored site reports.

The Louis Berger Group Field Technician, Richmond, Virginia, 2005-2007.
Performed fieldwork at all levels of excavation on a wide variety of projects.

The Ottery Group Field Technician, Silver Springs, Maryland, 2005.
Performed fieldwork on a complex multi-component historic Phase III in Gloucester, Virginia.

Example Projects and Publications

Phase I Surveys
Mecklenburg Timber and Prison sites, Mecklenburg Co
Dranesville Rd. Development, Fairfax Co
Pavilion Development, Prince William Co
Dry Mill, Loudoun Co
Remington to Gordonsville Transmission Line
Montebello Farm, Loudoun Co.
Arbordale, York Co.
Spotsylvania Town Center, City of Fredericksburg
Palmer's Creek, Spotsylvania Co.

Phase II Evaluations
44LD1244, Loudoun Co
44WM0312, Westmoreland Co

Museum Technical Reports
Object Report and Museum Purchasing Recommendations, The Montpelier Foundation, Orange Co
Report of Archaeological Testing at Mount Pleasant, The Montpelier Foundation, Orange Co
Archaeological Dataset and Context, Digital Archaeological Archive of Comparative Slavery

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DARA FRIEDBERG
Architectural Historian

D
A

Dutton + Associates

CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

Education

Master of Science, 2004
Historic Preservation
University of Pennsylvania
Philadelphia, Pennsylvania

Bachelor of Arts, 1999
Historic Preservation
Mary Washington College
Fredericksburg, Virginia

Ms. Friedberg holds a M.S. in Historic Preservation, concentrating in Architectural Conservation, from University of Pennsylvania and a B.A. in Historic Preservation from Mary Washington College. She has worked in historic preservation and conservation since 1999 and has taken part in projects in Virginia, Maryland, Pennsylvania, Washington, D.C., South Carolina, Georgia, Connecticut, New York, Illinois, Ohio, and Tennessee.

Her experience in Cultural Resource Management includes conducting field surveys, researching and documenting historic resources, preparing National Register of Historic Places nominations, performing archival research, assisting in Federal Tax Credit projects, and completing material analyses of historic mortar and paint.

Prior to working at Dutton + Associates, she was employed as a conservator. This allowed her to conduct multiple conditions assessments of architecture, monuments, and sculptures as well as provide treatment recommendations and project specifications. She has also physically worked on the conservation of stone, metal, and decorative painting. At the completion of each project she provided thorough documentation of each process undertaken.

As an Architectural Historian for Dutton + Associates, Ms. Friedberg collaborates on all aspects of historic and architectural projects including performing field work, conducting project research, and authoring project reports.

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Dutton + Associates

DARA FRIEDBERG
Architectural Historian

Professional Experience

Dutton + Associates, LLC, Architectural Historian, Midlothian, Virginia, 2013-Present
Conducts historic resources surveys, performs background research, develops historic contexts, writes National Register nominations, and authors and formats project reports

Kreilick Conservation, LLC, Conservator, Oreland, Pennsylvania, 2006-2012
Completed conditions assessments and treatment recommendations for stone and metal projects, conserved stone and metal architectural elements, monuments, and sculptures, and authored conservation reports.

Powers & Company, Inc., Preservation Associates, Philadelphia, Pennsylvania, 2002-2006
Conducted historic resources surveys, performed background research, assisted with Federal Historic Preservation Tax Credit projects, completed mortar and historic paint analyses, completed conditions assessments and recommendations for buildings, produced reports for large scale restoration projects, and created project specifications.

Albert Michaels Conservation, Inc., Conservation Technician, Harrisburg, Pennsylvania, 2001-2002
Conserved decorative paintings and refinished ornate wood, and authored conservation reports.

KCI Technologies, Inc., Cultural Resource Specialist, Hunt Valley, Maryland, 2000-2001
Conducted historic resources surveys, performed background research, and authored project reports.

Restoration Concepts, Restoration Intern, Burlington, Vermont, 1999
Assisted in the restoration of a building.

Example Projects

National Register of Historic Places Nominations
- Tower Building, Richmond
- Lee Medical Building, Richmond
- Fuqua Farm, Chesterfield

Preliminary Information Forms
- North Thompson Street Historic District, Richmond
- Virginia Avenue Elementary School, Petersburg

Interpretive Signs
- Skiffes Creek Interpretive Signs, multiple counties
- Spring Hill Plantation Interpretive Signs, Chesterfield Co.

Viewshed Analyses
- Viewshed Assessment for Fort Evans, Loudoun Co.
- Viewshed Analysis for Ellerslie, Surry Co.

Military Analyses and Landscape Studies
- Phase IA Assessment and Military Terrain Analysis of the Plantation Woods Property, Spotsylvania Co.
- Phase I, Viewshed Assessment, and Military Terrain Analysis for the Potato Run Mitigation Bank, Culpeper Co.
- Assessment of Two Core Areas of the Battle of Buckland Mills, Prince William Co.

Cultural Resource Survey and Compliance Reports
- Cultural Context and Thematic Study for the Proposed Revitalize RVA Project, Richmond
- Assessment of Fulton Gas Works, Richmond
- Documentary Study of the Cromley Row Project Area, Alexandria
- Study of Washington Boundary Ditches, Fairfax Co.
- Intensive Level Survey for Warehouse No. 3 of the Richmond Intermediate Terminal, Richmond
- Economic Context of Middlesex County and the Palmer House, Middlesex Co.
- Phase I Survey for the Remington-Gordonsville Transmission Line Rebuild Project, multiple counties
- Phase II Archaeological Evaluation of Site 44LD1244, Loudoun Co.

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APPENDIX B: ARTIFACT CATALOG

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Provenience	Strat.	Artifact	Qty.	Notes
Area A1 (44SY0303)				
B3	**I**	Iron plate	3	Very thin
B6	**I**	Ironstone, undecorated	1	
E5	**I**	Iron plate	2	Very thin
E7	**I**	Brick, handmade	1	2g
F4	**I**	Stoneware, bristol glaze with albany slip	1	
F5	**I**	Glass, colorless vessel	1	
F7	**I**	Glass, aqua window	1	
F7	I	Coal	1	45g
G7	**I**	Glass, aqua window	19	
G7	I	Rough coat plaster	2	93g
G7	I	Plaster. Rough coat with finish coat, and painted blue	3	18g
G7	I	Brick, handmade	3	51g
G7	I	Iron exhaust or vent	1	
G7	I	Iron fragments	9	Primarily thin pieces, unclear use.
G8	**I**	Glass, colorless vessel	1	Frosted
G8	I	Oyster shell	2	1g
H3	**I**	Refined earthenware, whiteware	1	
H7	**I**	Glass, colorless vessel	1	
Area A3				
J1	**I**	Native american pottery, worn impressed design	1	Gravel temper
K1	**I**	Native american pottery, stamped design	2	Thick utilitarian ware, Burned
K1	I	Native american pottery, stamped design	1	Thin
Area A5 (44IW0316)				
A1	**I**	Iron, unidentifiable	1	Corroded
A1	I	Mortar, sand based	1	6g
A3	**I**	Iron, fragment	1	
A3	I	Glass, solarized vessel	1	
A4	**I**	Glass, blue vesssel	1	Light blue, square bottle.
A5	**I**	Glass, colorless vessel	1	
A5	I	Glass, aqua window	2	

Provenience	Strat.	Artifact	Qty.	Notes
B2	**I**	Glass, colorless jar	1	
B2	I	Glass, aqua window	1	
B3	**I**	Glass, aqua vessel	1	
B3	I	Glass, colorless vessel	1	
B3	I	Nail, machine cut	1	
B4	**I**	Prosser, button. Four-hole.	1	14mm diameter
B4	I	Glass, solarized vessel	2	
B4	I	Glass, colorless vessel	2	
B4	I	Porcelain, bisque. Likely Figurine fragment.	1	
B4	I	Lid liner, milk glass	1	
B4	I	Glass, aqua window	2	
B4	I	Flake, primary	1	Quartzite
B4	I	Iron fragment, unidentifiable	1	
B5	**I**	Refined earthenware, ironstone	2	
B5	I	Glass, colorless vessel	1	
B5	I	Glass, colorless vessel	1	Melted
B5	I	Glass, aqua window	2	
C3	**I**	Iron fragment, unidentifiable	1	
C4	**I**	Refined earthenware, ironstone	1	
C4	I	Glass, cobalt blue vessel	1	
C4	I	Glass, blue vesssel	1	Light blue
C5	**I**	Glass, dark green bottle	1	
C5	I	Brick	1	<1g
D1	**I**	Glass, colorless	1	Thin vessel or lantern
D4	**I**	Stoneware, white glazed	1	
D5	**I**	Oyster shell	1	
Area A6.2 (44SY0304)				
-B3	**I**	Refined earthenware, whiteware	1	
-A1	**I**	Refined earthenware, ironstone	1	
-A3	**I**	Iron fragment, unidentifiable	1	Corroded
A1	**I**	Brick, handmade	2	176g
A2	**I**	Nail, machine cut	1	Heavily corroded
B1	**I**	Iron fragment, unidentifiable	3	
B4	**I**	Nail, corroded and unidentifiable	1	
B4.5	**I**	Milk glass	2	

Provenience	Strat.	Artifact	Qty.	Notes
Area A7 (44SY0307)				
-A4	**I**	Brick, handmade	3	13g
A3	**I**	Brick, handmade	3	9g
A4	**I**	Nail, machine cut or wrought	1	Corroded
A5	**I**	Nail, unidentifiable	3	Corroded
B3	**I**	Brick, handmade	8	12g
B3	I	Iron fragment	3	
B4	**I**	Mortar, sand based	1	4g
B4	I	Glass, colorless vessel	2	
B5	**I**	Brick, handmade	7	2g
C2	**I**	Iron fragment, nail or wire	1	Corroded
D2	**I**	Nail, machine cut or wire	1	Heavily corroded, round head
D2	I	Brick, handmade	1	4g
D5	**I**	Nail, unidentifiable	5	Corroded
D5	I	Brick, handmade	1	4g
D7	**I**	Brick, fragment	N/A	Not Collected
D11	**I**	Flake, tertiary	1	Quartzite
Surface Collection Between D2 and E2	**I**	Flake, tertiary	1	Quartzite
Surface Collection Between D2 and E2	I	Projectile point, broken triangular point	1	Quartzite
E2	**I**	Brick, handmade	1	1g
E2	**I**	Iron, fragment	1	
E8	**I**	Fire cracked rock	1	
E10	**I**	Broken stone with visible pockmarks. Possibly broken hammerstone	1	
F2.5	**I**	Glass, colorless vessel	1	Jar or cup
F2.5	I	Glass, modern brown bottle glass	1	
F2.5	I	Brick, handmade	1	6g
F3	**I**	Refined earthenware, ironstone	1	
F3	I	Glass, aqua window	1	
F3	I	Brick, handmade	3	12g
F3	I	Iron fragment, flat	1	Corroded

Provenience	Strat.	Artifact	Qty.	Notes
Surface Collection 3feet west of F3	**I**	Toy Marble, white with black striations	1	Made of marble or clay. 18.4mm Diameter
Surface Collection 3feet south of F3	**I**	Glass, molded purple with an impressed diamond starburst design	1	Rectangular, possibly purely decorative
F4	**I**	Porcelain, likely chinese or japanese, molded design and handpainted linear decoration	1	
F4	I	Glass, solarized vessel	1	
F4	I	Glass, amber vessel	1	
F4	I	Nail, unidentifiable	1	
F4	I	Brick, handmade	6	95g
F5	**I**	Nail, unidentifiable	1	Corroded
G4	**I**	Stoneware,bristol glaze with albany slip	1	
G5	**I**	Brick, handmade	1	111g
G8	**I**	Brick, handmade	2	One glazed. 9g
G8	I	Refined earthenware, ironstone	1	
G8	I	Lithic shatter, primary	1	
H5	**I**	Brick, handmade	1	6g
Area A8				
AB2	**I**	Refined earthenware, whiteware	1	
B1	**I**	Brick, handmade	1	31g
B2	**I**	Glass, colorless vessel	1	
B2.5	**I**	Brick, fragment	N/A	<1g, Not Collected
Area A10 (44SY0306)				
-A2	**I**	Brick, handmade	N/A	Not Collected
A1	**I**	Brick, handmade	N/A	<1g, Not Collected
A2	**I**	Brick, handmade	N/A	<1g, Not Collected
B1	**I**	Brick, handmade	4	106g
B1	I	Mortar, sand based	10	14g
C3	**I**	Glass, light blue vessel	1	
C5	**I**	Nail, unidentifiable	1	
D1	**I**	Glass, colorless vessel	1	
D2	**I**	Brick, handmade	N/A	<1g, Not Collected
D3	**Surface**	Glass, solarized vessel	1	
D4	**Surface**	Brick, handmade	N/A	Surface Scatter, not collected.

Provenience	Strat.	Artifact	Qty.	Notes
Surface between D4 and D5	**Surface**	Stoneware, bristol salt glaze with albany slip	1	
F4	**I**	Brick, handmade	1	3g
Area A11 (44SY0305)				
Surface Collection 1	**Surface**	Refined Earthenware, whiteware	1	
Surface Collection 1	Surface	Refined Earthenware, whiteware	1	
Surface Collection 1	Surface	Stoneware, white salt-glaze	1	
Surface Collection 1	Surface	Porcelain, bisque with pink exterior	1	
Surface Collection 1	Surface	Glass, colorless	1	
Surface Collection 1	Surface	Glass, aqua window	1	
Surface Collection 1	Surface	Glass, aqua pharmecutical bottle. Embossed "TAYLOR DRUG, RICHMOND VA"	1	Post 1890 (Active until at least 1931)
Surface Collection 1	Surface	Brick, handmade	2	148g
Surface Collection 2	**Surface**	Flake, tertiary	1	Quartzite
Surface Collection 3	**Surface**	Ironstone, undecorated	1	Thick
Area A13				
A1	**I**	Nail, machine cut	1	
O11	**I**	Lithic shatter	1	
Area A14				
A3	**I**	Stone, possible shatter	1	
Area A15				
A8	**I**	Brick, handmade	1	>1g
Area A15 (44SY0326)				
D3	**I**	Refined earthenware, whiteware	1	
D3	I	Brick, handmade	1	20g, Rusticated.
D4	**I**	Brick, handmade	N/A	Not Collected
EF3	**I**	Brick, handmade	N/A	Not Collected
F2	**I**	Nail, machine cut or wrought	1	
F2	I	Nail, unidentifiable	2	
F3	**I**	Refined earthenware, whiteware	2	
F3	I	Brick, handmade	1	10g

Provenience	Strat.	Artifact	Qty.	Notes
Area A16				
F5	**I**	Shatter, secondary	1	Quartzite
Area B1				
Surface Collection 1	**Surface**	Refined earthenware, whiteware	2	
Surface Collection 1	Surface	Coarse earthenware, redware doorknob	1	
Surface Collection 1	Surface	Glass, bright green bottle	1	
Surface Collection 1	Surface	Glass, bright green bottle body with textured surface. Embossed O.S.	1	
Surface Collection 1	Surface	Glass, aqua vessel. Molded	1	
Surface Collection 1	Surface	Glass, aqua vessel with embossed lettering. "NATIO"	1	
Surface Collection 1	Surface	Glass, milk glass handlewith green paint on exterior	1	
Surface Collection 1	Surface	Glass, colorless pharmeceutical or perfume bottle	1	
C1	**I**	Iron fragment	1	Large flat fragment. 339g
C2	**I**	Nail, machine cut	2	Mend to each other
Area B1 (44SY0308)				
F12	**I**	Glass, aqua window	1	
G12	**I**	Glass, colorless vessel	1	
G12	I	Nail, unidentifiable	1	
G12	I	Nail, unidentifiable	1	
H9	**I**	Glass, colorless vessel	4	
H9	I	Glass, colorless vessel with molded diamond design	1	
H9	I	Glass, bright green vessel	1	
H9	I	Glass, aqua window	1	
H9	I	Brick, handmade	1	39g
H9	I	Penny, dated 1969	1	
H9	I	Fabric, loose woven. Possibly muslin or linen	1	
H10	**I**	Glass, aqua vessel	1	
H10	I	Glass, colorless vessel	1	
H10	I	Nail, unidentifiable	1	
H11	**I**	Glass, dark green bottle	1	

Provenience	Strat.	Artifact	Qty.	Notes
H11	I	Glass, colorless fragment	1	
H11	I	Nail, machine cut	1	
H13	**I**	Glass, brown bottle	1	
H13	I	Glass, colorless vessel	1	
H13	I	Iron fragments	2	
J8	**I**	Glass, aqua vessel	1	
J8	I	Glass, cobalt blue vessel	1	
J8	I	Glass, dark green vessel	1	
J8	I	Glass, colorless vessel	8	
J8	I	Glass, Aqua fragment	4	
J8	I	Brick, handmade	1	2g
J8	I	Nail, unidentifiable	1	
J8	I	Iron fragment	5	
J9	**I**	Marble, green glass with a white swirl	1	
J9	I	Refined earthenware, whiteware	1	
J9	I	Refined earthenware, unglazed	1	
J9	I	Button, orange plastic, four hole	1	11.8mm diameter
J9	I	Glass, aqua vessel	8	
J9	I	Glass, brown vessel	1	
J9	I	Glass, colorless glass vessel	15	
J9	I	Glass, colorless glass vessel	1	Embossed "66"
J9	I	Glass, discolored vessel	1	
J9	I	Glass, colorless window	3	
J9	I	Plastic, Pepsi bottlecap liner	1	1962-1972
J9	I	Aluminum, Pepsi bottlecap	1	1962-1972
J9	I	Plastic, black with impressed striations	1	
J9	I	Brick, handmade	1	4g
J9	I	Iron fragment	5	Unidentifiable
J9	I	Nail, unidentifiable	4	Heavily corroded
J10	**I**	Porcelain, hard paste	1	Likely teacup
J10	I	Plastic fragment	1	White plastic
J10	I	Stoneware, gray salt glazed	1	
J10	I	Glass, colorless vessel	7	
J10	I	Glass, colorless fragment	1	
J10	I	Glass, aqua fragment	1	
J10	I	Glass, aqua window	1	

Provenience	Strat.	Artifact	Qty.	Notes
J10	I	Nail, unidentifiable	2	
J10	I	Iron fragment	1	<1g
J10	I	Brick, handmade	1	<1g
J11	**I**	Glass, light green vessel	1	
J12	**I**	Glass, brown vessel	1	
J13	**I**	Glass, colorless vessel	1	
K8	**I**	Refined earthenware, whiteware with stippled rim	1	
K8	I	Glass, aqua vessel	3	
K8	I	Glass, brown bottle	1	
K8	I	Glass, colorless glass vessel	7	
K8	I	Glass, colorless lantern	1	Very thin
K8	I	Glass, colorless window	3	
K8	I	Brick, handmade	3	4g
K8	I	Nail, machine cut or wrought	1	
K8	I	Iron fragment	1	
K9	**I**	Glass, aqua fragment	1	
K9	I	Glass, colorless vessel	1	
K9	I	Glass, colorless vessel embossed "H-464"	1	
K9	I	Brick, handmade	1	2g
K10	**I**	Glass, colorless vessel	2	
K10	I	Rubberor synthetic valve	1	
K11	**I**	Glass, colorless vessel	2	
K11	I	Nail, machine cut or wrought	1	
K12	**I**	Nail, machine cut or wrought	1	
K12	I	Nail, unidentifiable	1	
L8	**I**	Refined earthenware, whiteware	1	
L8	I	Glass, bright green bottle	1	
L8	I	Glass, aqua window	2	
L8	I	Glass, colorless vessel	3	
L8	I	Glass, colorless bottle with threaded closure	1	
L8	I	Glass, colorless fragment	1	
L8	I	Brick, handmade	7	16g
L9	**I**	Glass, aqua fragment	1	
L9	I	Glass, colorless window	1	

Provenience	Strat.	Artifact	Qty.	Notes
L9	I	Glass, colorless vessel	1	
L9	I	Brick, handmade	1	2g
L9	I	Synthetic material	1	
M8	**I**	Stoneware, gray salt glaze	1	
M8	I	Glass, colorless vessel	5	
M8	I	Glass, colorless vessel, molded ridges	1	
M8	I	Brick, handmade	3	6g
M8	I	Nail, unidentifiable	1	
M9	I	Glass, bright green bottle	1	
M9	I	Glass, aqua vessel	1	
M9	I	Glass, light blue with molded ridge	1	
M9	I	Glass, colorless vessel with molded grid on exterior	1	
M9	I	Glass, colorless window	1	
M9	I	Brick, handmade	3	26g
M11	**I**	Brick, handmade	1	2g
M11	I	Iron fragment	2	Heavily corroded
M15	**I**	Glass, Aqua fragment	1	
N7	**I**	Glass, colorless fragment	1	
N7	I	Brick, handmade	N/A	Not Collected
N8	**I**	Glass, colorless vessel	3	
N8	I	Iron fragment	1	
N9	**I**	Glass, colorless vessel with embossed design	1	
N9	I	Glass, milk glass fragment	1	
N9	I	Graphite, tube	1	
N9	I	Nail, machine cut or wrought	2	
N9	I	Brick, handmade	1	2g
N10	**I**	Glass, colorless vessel	2	
N11	**I**	Glass, brown bottle	1	
N11	I	Glass, coloress fragment	1	
N11	I	Iron fragment	2	
N11	I	Brick, handmade	1	1g
N13	**I**	Brick, handmade	N/A	Not Collected
N15	**I**	Glass, brown bottle	1	
N15	I	Iron fragment	2	
P8	**I**	Refined earthenware, whiteware	1	
P8	I	Stoneware, brown salt glaze	1	

Provenience	Strat.	Artifact	Qty.	Notes
P8	I	Brick, handmade	1	2g
P9	**I**	Glass, aqua window	1	
Area B2 (44SY0309)				
-B3	**I**	Glass, colorless bottle with embossed "O"	1	
-B3	I	Nail, unidentifiable	5	Heavily corroded with conglomerate
-A1	**I**	Nail, unidentifiable	1	
-A1	I	Iron, jar or canister lid	3	Heavily corroded
-A1	I	Iron, fragment	2	
-A2	**I**	Nail or hook, unidentifiable	1	
-A3	**I**	Porcelain, european hard paste	1	
-A4	**I**	Nail, unidentifiable	1	Possibly two nails corroded together
-A5	**I**	Ironstone, undecorated	1	
A1	**I**	Glass, Aqua window	1	
A2	**I**	Nail, unidentifiable	1	
A3	**I**	Refined earthenware, whiteware	2	
A3	I	Glass, colorless vessel	8	
A3	I	Glass, colorless vessel with molded ridges	1	
A3	I	Glass, solarized vessel	1	
A3	I	Glass, aqua vessel	1	Frosted
A3	I	Glass, aqua window	1	
A3	I	Nail, wrought	1	
A3	I	Nail, unidentifiable	3	
A3	I	Nail, unidentifiable	1	
A3	I	Iron fragment, unidentifiable	1	Flat slab
A3	I	Stoneware, unglazed with ridged exterior	1	
A4	**I**	Glass, colorless vessel	1	
A4	I	Glass, colorless fragment	1	
A4	I	Glass, colorless vessel with embossed "IN"	1	
A4	I	Glass, colorless drinking vessel with molded decoration	1	
A4	I	Glass, brown bottle	1	
A4	I	Nail, unidentifiable	2	
A5	**I**	Refined earthenware, whiteware	1	

Provenience	Strat.	Artifact	Qty.	Notes
A5	I	Glass, aqua window	1	
A5	I	Glass, colorless vessel	1	
A5	I	Oyster Shell	1	6g
A5	I	Nail, machine cut	1	
A5	I	Nail, machine cut	1	
A6	**I**	Stoneware, bristol glaze with albany slip	1	
B2	**I**	Bolt, heavily corroded	1	
B3	**I**	Refined earthenware, whiteware	2	
B3	I	Refined earthenware, whiteware	1	
B3	I	Glass, colorless vessel	1	
B3	I	Brick, handmade	1	3g
B8	**I**	Glass, colorless vessel, jar	1	
C2	**I**	Glass, colorless vessel with molded exterior ridges	1	
C2	I	Glass, colorless vessel with molded panels, embossed "E"	1	
C2	I	Glass, aqua fragment	1	
C2	I	Refined earthenware, whiteware	1	
C3	**I**	Glass, colorless window	1	
C3	I	Brick, handmade	1	2g
C3	I	Charcoal	2	
C4	**I**	Glass, aqua fragment	1	
C4	I	Bone, animal	1	Likely bird
C4	I	Plaster, rough coat with finish coat attached	7	One burned. 30g
C4	I	Nail, machine cut	8	Long 3in nails. Some burned.
C4	I	Nail, machine cut	28	Small tacking nails
C4	I	Nail, machine cut	9	
C4	I	Charcoal	1	2g
C5	**I**	Glass, colorless window	1	
C8	**I**	Glass, aqua vessel	1	
C8	I	Brick, mortar	1	1g
D2	**I**	Oyster Shell	2	14g
D3	**I**	Nail, unidentifiable	1	
D4	**I**	Nail, machine cut or wrought	1	
D5	**I**	Nail, unidentifiable	1	

Provenience	Strat.	Artifact	Qty.	Notes
E3	**I**	Glass, colorless vessel	1	
E3	I	Glass, aqua fragment	1	
E3	I	Nail, machine cut	1	
E3	I	Nail, machine cut	1	
E3	I	Nail, unidentifiable	2	
E3	I	Nail, unidentifiable	1	
EF3	**I**	Iron fragment, u-shaped	1	
EF3	I	Brick, handmade	2	36g
Area B3				
Surface Collection 1	**Surface**	Stoneware, westerwald with incised linear design and cobalt blue decoration	1	
Surface Collection 1	Surface	Stoneware, gray salt glaze	1	
Surface Collection 1	Surface	Stoneware, brown salt glaze	1	
Surface Collection 1	Surface	Glass, dark green bottle	1	
Surface Collection 1	Surface	Glass, solarized bottle	1	
Surface Collection 1	Surface	Glass, solarized bottle with tooled tapered lip. Melted	1	1880-1910
Surface Collection 1	Surface	Shatter, tertiary.	1	Quartzite
Area B3 (44SY0310)				
Judgmental 1	**I**	Brick, handmade	5	102g
Judgmental 1	I	Mortar, sand based	1	31g
Judgmental 1	I	Iron fragment, flat	1	
Judgmental 2	**I**	Ironstone, undecorated	1	
Judgmental 2	I	Glass, light blue bottle	2	
Judgmental 2	I	Glass, colorless vessel	2	
Judgmental 2	I	Glass, colorless bowl	1	
Judgmental 2	I	Iron fragments, unidentifiable	9	
Judgmental 2	I	Brick, handmade	1	14g
Judgmental 2	I	Shoe, leather throat with eyelets	1	
Judgmental 3	**I**	Ironstone, undecorated	2	
Judgmental 3	I	Ironstone, undecorated	1	
Judgmental 3	I	Refined whiteware, whiteware	1	
Judgmental 3	I	Glass, colorless vessel	1	

Provenience	Strat.	Artifact	Qty.	Notes
Judgmental 3	I	Brick, handmade	1	
Judgmental 5	**I**	Refined earthenware, whiteware	1	
Judgmental 5	I	Glass, milk glass	1	Likely lid liner
Judgmental 5	I	Glass, solarized vessel	1	
Judgmental 5	I	Glass, aqua window	2	
Judgmental 5	I	Glass, colorless bottle	1	1890-1910
Judgmental 5	I	Nail, machine cut or wrought	1	
Judgmental 5	I	Oyster Shell	5	24g
Judgmental 5	**II**	Ironstone, undecorated	4	
Judgmental 5	II	Ironstone, undecorated	1	
Judgmental 5	II	Glass, colorless vessel	2	
Judgmental 5	II	Brick, handmade	1	4g
Judgmental 5	II	Iron fragment	1	
Judgmental 6	**I**	Refined earthenware, whiteware	1	
Judgmental 6	I	Glass, aqua window	2	
Judgmental 6	I	Glass, aqua vessel	1	
Judgmental 6	I	Oyster Shell	7	23g
Judgmental 6	I	Nail, machine cut	1	
Judgmental 6	I	Nail, unidentifiable	1	
Judgmental 6	I	Brick, handmade	5	155g
Judgmental 6	I	Iron chain, 5 links	1	
Judgmental 6	**II**	Nail, unidentifiable	1	Heavily corroded with conglomerate
Judgmental 6	II	Brick, handmade	1	3g
Judgmental 7	**I**	Refined earthenware, shell-edge	1	
Area B4				
AB1	**I**	Brick, fragment	N/A	Not Collected
Area B4 (44SY0311)				
Surface Find 1, 10ft from D1	**Surface**	Glass, colorless bottle. Embossed "TRADE MARK VASELINE CHESEBROUGH NEW-YORK"	1	1918-1938
D0.5	**I**	Brick, handmade	2	36g
D1	**I**	Buckle, iron	1	
D1	I	Nail, unidentifiable	1	
D2	**I**	Glass, aqua window	1	
D2	I	Nail, machine cut	1	
DE1	**I**	Nail, unidentifiable	1	

Provenience	Strat.	Artifact	Qty.	Notes
DE1	I	Glass, aqua vessel	1	
DE1	I	Glass, cobalt blue vessel	1	
DE1	I	Brick, handmade	1	1g
E-1	**I**	Brick, handmade	1	13g
EF1	**I**	Ironstone, undecorated	1	
EF1	I	Ironstone, undecorated	2	
G1	**I**	Nail, wrought	1	
G2	**I**	Prehistoric tool, Knife.	1	Single sided blade
Area B5 (44SY0312)				
B1	**I**	Refined whiteware, whiteware	1	
B1	I	Refined whiteware, whiteware	1	
B1	I	Refined whiteware, whiteware, impressed waved line	1	
B1	I	Glass, colorless vessel, molded raised dots	1	
C1	**I**	Glass, colorless vessel	3	
C1	I	Glass, aqua bottle. Tooled ring.	1	1890-1910
C1	I	Iron bearing, ring	1	86g
C2	**I**	Glass, colorless window	2	
D1	**I**	Glass, aqua fragment	1	
Area B7				
C3	**I**	Flake, secondary	1	Quartzite
C4	**I**	Prehistoric pottery, sand temper	1	
C4	I	Prehistoric pottery, sand temper	1	
Area B9				
Surface Collection 1	**Surface**	Stoneware, white glaze, blue handpainted	1	
Area B10				
Surface Collection 1	**I**	Brick, handmade	1	9g
Judgmental 1	**I**	Glass, aqua vessel	1	
Area C1 (44SY0316)				
A1	**I**	Refined earthenware, whiteware	1	Lightly molded
A4	**I**	Glass, milk glass lid liner	1	
A4.5	**I**	Glass, colorless fragment	1	
B5	**I**	Ironstone, undecorated	1	
B7	**I**	Brick, handmade	1	8g
C2	**I**	Ironstone, undecorated	1	

Provenience	Strat.	Artifact	Qty.	Notes
C2.5	**I**	Ironstone, printed maker's mark	1	Possibly from the International Pottery Co., Iron cross visible.
C3	**I**	Glass, Aqua vessel	1	
C3	I	Glass, brown bottle. Embossed "..ON"	1	
C5	**I**	Glass, colorless	1	
D1	**I**	Glass, light blue fragment	1	
D1	I	Brick, fragment	N/A	Not Collected
D2	**I**	Glass, aqua window	1	
D2	I	Glass, solarized vessel	1	
D2	I	Glass, light green vessel with molded chevron and stippled design	1	
D2	I	Nail, machine cut or wrought	1	
D2	I	Brick, fragment	N/A	Not Collected
D3	**I**	Brick, fragment	N/A	Not Collected
D5	**I**	Brick, fragment	N/A	Not Collected
D6	**I**	Brick, fragment	N/A	Not Collected
E1	**I**	Glass, aqua vessel	1	
E1	I	Glass, colorless vessel. Paneled	1	
E1	I	Nail, machine cut or wrought	1	
E3	**I**	Refined earthenware, Whiteware	1	
E3	I	Brick, Fragment	1	<1g
E3	I	Iron fragment	1	29g
E5	**I**	Ironstone, undecorated	1	
E6	**I**	Brick, fragment	N/A	<1g, Not Collected
F0.5	**I**	Ironstone, undecorated	2	
F1	**I**	Stoneware, bristol glaze with albany slip	1	Utilitarian ware
F1	I	Refined earthenware, whiteware	1	Burned
F1	I	Glass, aqua vessel	2	
F1	I	Glass, aqua vessel, melted	1	
F1	I	Glass, aqua window	1	
F1	I	Brick, handmade	1	14g
F2	**I**	Glass, solarized vessel	1	
F2	I	Glass,aqua vessel	1	
F2	I	Glass, aqua vessel with crackled interior	1	

Provenience	Strat.	Artifact	Qty.	Notes
F2	I	Glass, aqua vessel. Frosted	1	
F2	I	Glass, milk glass vessel	1	
F2	I	Nail, machine cut or wrought	1	
F2	I	Brick, handmade	8	64g
F5	**I**	Glass, solarized vessel	1	
F5	I	Glass, solarized lantern	1	
G-2	**I**	Refined earthenware, whiteware	1	
G-1.5	**I**	Refined earthenware, whiteware	2	
G-1	**I**	Glass, colorless	1	
G-1	I	Glass, aqua vessel	1	
G1	**Surface**	Ironstone, undecorated	3	
G1	Surface	Porcellaneous	1	
G1	Surface	Porcellaneous	1	
G1	Surface	Stoneware, bristol glaze with albany slip	2	Utilitarian ware
G1	Surface	Stoneware, interior brown lead glaze	1	
G1	Surface	Stoneware, black lead glaze	1	
G1	Surface	Stoneware, unglazed	1	
G1	Surface	Porcellaneous, teaware. Burned	1	
G1	Surface	Glass, solarized bottle	1	
G1	Surface	Glass, Aqua bottle. Paneled pharmeceutical bottle	1	
G1	Surface	Glass, colorless vessel	1	Lightly solarized
G1	Surface	Glass, dark green fragment	1	More emerald green tinted than the typical olive green
G1	Surface	Glass, milk glass fragment.	1	Melted
G1	Surface	Brick, handmade	2	9g
G1	**I**	Refined earthenware, whiteware	1	
G1	I	Stoneware, black lead glaze	1	
G1	I	Glass, aqua vessel	1	
G1	I	Glass, aqua vessel	1	Frosted
G1	I	Glass, aqua fragment	1	Melted
G1	I	Brick, handmade	1	9g
G2	**Surface**	Porcellaneous, undecorated	1	
G2	Surface	Stoneware with exterior black glaze. Burned	1	

Provenience	Strat.	Artifact	Qty.	Notes
G2	Surface	Glass, milk glass with partial triangular mark.	1	Heat exposed
G2	Surface	Glass, aqua vessel	1	
G2	Surface	Brick, handmade	1	5g
G2	**I**	Refined earthenware, whiteware	1	
G2	I	Glass, aqua vessel	4	
G2	I	Glass, colorless fragment	1	
G2	I	Glass, brown bottle	1	
G3	**I**	Refined earthenware, whiteware	1	
G3	I	Glass, milk glass vessel	1	
G7.5	**I**	Refined earthenware, whiteware	1	
G7.5	I	Glass, solarized bottle	1	Flat tooled lip
G7.5	I	Glass, solarized fragment	1	
G7.5	I	Glass, colorless vessel	1	
G8	**I**	Refined earthenware, whiteware	1	
H0.5	**I**	Glass, colorless fragments	2	
H0.5	I	Brick, fragment	N/A	Not Collected
H1	**I**	Refined earthenware, whiteware	1	
H1	I	Stoneware, black lead glaze with unglazed exterior	1	
H2	**I**	Glass, light blue vessel	1	Melted
H2	I	Glass, aqua window	1	
H2	I	Nail, machine cut.	1	
H3	**I**	Refined earthenware, whiteware	1	
HJ1	**I**	Glass, solarized vessel	1	
HJ1	I	Refined earthenware, whiteware	2	
HJ2	**I**	Refined earthenware, agateware doorknob	1	Heat exposed
HJ2	I	Glass, aqua fragment	1	
HJ2	I	Glass, colorless fragment	2	
HJ2	I	Brick, handmade	1	2g
HJ10	**I**	Glass, aqua vessel	1	
J3	**I**	Refined earthenware, whiteware	3	
J3	I	Nail, machine cut or wrought, stuck through grommet	1	
J8	**I**	Ironstone, undecorated	1	
J9	**I**	Glass, aqua window	1	
J10	**I**	Refined earthenware, whiteware	1	

Provenience	Strat.	Artifact	Qty.	Notes
J10	I	Glass, solarized vessel	1	
K2	**I**	Glass, colorless. Textured on one side with impressed grooves	1	Melted
K6	**I**	Refined earthenware, unglazed	1	
K7	**I**	Iron fragment	1	Corroded, unidentifiable
K10	**I**	Brick, handmade	1	3g
Area C2 (44SY0317)				
-A3	**I**	Horseshoe	1	Missing one end of shoe, remainder intact.
-A4	**I**	Glass, colorless window	1	Thick
-A4	I	Ironstone, undecorated. Light blue discoloration.	1	
-A4	I	Ironstone, undecorated	1	
-A4	I	Brick, handmade	1	1g
-A5	**I**	Porcelain, hard paste with pink decoration	1	
-A5	I	Glass, solarized vessel	1	
-A5	I	Glass, colorless vessel with molded rim	1	
-A5	I	Bottlecap, iron alloy	2	Likely part of the same cap
A-A4	**I**	Ironstone, scalloped edge	1	
A-A4	I	Glass, colorless window	1	
A-A6	**I**	Nail, wire	1	
A-A6	I	Nail, machine cut or wire	1	Dessicated and corroded
A-A6	I	Nail, unidentifiable	1	
A-A6	I	Brick, handmade	1	6g
A4	**I**	Glass, colorless bottle	1	
A4	I	Glass, colorless bottle with molded measurrment levels	1	Possible milk bottle
A4	I	Glass, colorless bottle	3	
A4	I	Nail, wire	1	
A4	I	Steel mesh	1	
A6	**I**	Porcellaneous, with a white glazed interior and buff exterior	2	
A6	I	Metal fragment, Likely machine part or wedge	1	Evenly distributed deep pink corrosion

Provenience	Strat.	Artifact	Qty.	Notes
A6	I	Brick	N/A	Not collected
AB3	**I**	Stoneware, gray salt glaze	1	
AB3	I	Synthetic material, possibly rubber	1	
AB3	I	Fabric, possibly burlap	2	
B3	**I**	Glass, brown bottle	1	
B3	I	Nail, wire	1	
C5	**I**	Glass, brown bottle with patina on interior	2	
Area C5 (44SY0318)				
-C-8	**I**	Nail, machine cut or wrought	1	Bent back on itself into hook shape
-C-8	I	Wire	1	Heavily corroded
-C-8	I	Nail, machine cut or wrought	1	Heavily corroded small fragment
-C-6	**I**	Brick, fragment	N/A	Not collected
-C1	**I**	Brick, fragment	N/A	Not collected
-C2	**I**	Nail, unidentifiable	2	
-B-8	**I**	Glass, colorless vessel	1	
-B-8	I	Iron fragment	3	
-B-8	I	Nail, wrought	2	
-B-8	I	Nail, unidentifiable	1	
-B-8	I	Nail, unidentifiable	1	
-B-7	**I**	Brick, fragment	N/A	Not collected
-B-6	**I**	Brick, handmade	1	27g
-B-2	**I**	Glass, colorless vessel	1	Lighty solarized
-B-2	I	Brick, handmade	N/A	Not collected. Approximately 4g.
-B-1	**I**	Glass, aqua vessel	1	
-B-1	I	Nail, unidentifiable	1	
-B-1	I	Brick, handmade	1	1g
-B1	**I**	Ironstone, undecorated	1	
-B1	I	Glass, aqua vessel	1	
-B1	I	Glass, light blue vessel	1	
-B1	I	Glass, solarized vessel with embossed measurement scale	1	
-B1	I	Glass, solarized vessel	2	
-B1	I	Glass, solarized fragment	1	Thin, likely lantern or drinking glass
-B1	I	Glass, colorless vessel	1	

Provenience	Strat.	Artifact	Qty.	Notes
-B1	I	Glass, colorless vessel with molded flutes	1	
-B1	I	Glass, colorless vessel with iron corrosion attached	1	Thin, likely lantern or drinking glass
-B1	I	Brick, handmade	3	34g
-B1	I	Iron fragment	1	90g. Large triangle of unknown use.
-B2	**I**	Refined earthenware, whiteware	1	
-B2	I	Glass, colorless vessel	2	
-B3	**I**	Glass, colorless vessel	3	
-B3	I	Glass, light blue fragment	1	
-B3	I	Glass, aqua window	1	
-B3	I	Nail, unidentifiable	1	
-B4	**I**	Nail, machine cut or wrought	1	
-B4	I	Nail, machine cut or wrought	1	
-B5	**I**	Nail, unidentifiable	1	Heavily Corroded
-B6	**I**	Brick, fragment	N/A	Not collected
-B7	**I**	Brick, fragment	N/A	Not collected
-B8	**I**	Brick, fragment	N/A	Not collected
-A-8	**I**	Refined earthenware, black glaze	1	
-A-8	I	Glass, colorless vessel with decorative crazing	1	Cracks do not go through glass, only interior
-A-8	I	Iron fragment, flat	1	
-A-7	**I**	Brick, fragment	N/A	Not collected
-A-6	**I**	Brick, fragment	N/A	Not collected
-A-6	**I**	Glass, colorless vessel	1	
-A-4	**I**	Glass, colorless vessel	1	
-A-4	I	Glass, brown bottle with molded decoration	1	
-A-4	I	Nail, unidentifiable	3	
-A-4	I	Iron fragment	3	
-A-4	I	Iron fragment, semicicular flat fragment	1	
-A-2	**I**	Glass, aqua vessel. Threaded.	1	
-A-2	I	Iron fragment	1	Heavily corroded
-A-1	**I**	Refined earthenware, whiteware	1	
-A-1	I	Porcelain, hard paste	1	
-A-1	I	Nail, machine cut or wrought	2	

Provenience	Strat.	Artifact	Qty.	Notes
-A1	**I**	Glass, colorless frosted vessel	1	
-A1	I	Coal	1	
-A1	I	Nail, unidentifiable	2	
-A1	I	Iron fragment	1	Circular, possibly button
-A1	I	Iron fragment	3	Heavily corroded
-A2	**I**	Copper alloy, gear	1	1.7in diameter, five spokes. Likely part of clock
-A3	**I**	Glass, solarized vessel	2	
-A3	I	Glass, colorless vessel with molded ridge	1	Thin, possibly lantern or drinking vessel.
-A3	I	Glass, colorless vessel	1	
-A3	I	Bead, red glass. Oval shaped.	1	11.5mm by 14.5mm
-A3	I	Nail, unidentifiable	4	
-A5	**I**	Glass, colorless frosted fragment	1	Melted.
-A7	**I**	Brick, fragment	N/A	Not collected
A-9	**I**	Nail, machine cut or wire	1	
A-7	**I**	Glass, aqua vessel	1	
A-7	I	Brick, handmade	1	4g
A-6	**I**	Refined earthenware, whiteware with green floral trasferprint	1	
A-6	I	Glass, colorless vessel	1	
A-6	I	Brick, handmade	1	43g
A-6	I	Iron fragment	1	
A-5	**I**	Nail, machine cut or wrought	1	
A-5	I	Brick, handmade	2	
A-4	**I**	Glass, Aqua vessel	1	
A-4	I	Brick, handmade	1	19g
A-3	**I**	Glass, colorless vessel with stipple texture exterior	1	
A-2	**I**	Glass, aqua vessel	1	
A-2	I	Asphalt	1	1g
A-2	I	Nail, unidentifiable	1	
A-2	I	Brick, handmade	3	8g
A-1	**I**	Porcelain, hard paste.	1	
A-1	I	Glass, colorless vessel	3	

Provenience	Strat.	Artifact	Qty.	Notes
A-1	I	Glass, aqua vessel with rouletted impressed band of dots	1	
A-1	I	Glass, light blue vessel	1	
A-1	I	Nail, unidenifiable	1	
A-1	I	Iron fragment	3	
A-1	I	Brick, handmade	6	69g
A1	**I**	Glass, solarized vessel	2	
A1	I	Glass, aqua vessel	1	
A1	I	Possible gullet stone, quartz	1	
A1	I	Brick, handmade	4	35g
A1	I	Structural material, sand-based mortar attached to gravel based conglomerate	1	519g
A1	I	Coal	1	4g
A2	**I**	Refined earthenware, whiteware	1	
A2	I	Nail, unidentifiable	3	Heavily Corroded
A2	I	Gravel based mortar, or early structural material	1	142g
A2	I	Brick, handmade	9	94g
A3	**I**	Nail, unidentifiable	1	
A4	**I**	Nail, unidentifiable	1	
A4	I	Brick, handmade	1	3g
A5	**I**	Iron fragment	1	Small iron bar with groove.
A7	**I**	Brick, fragment	N/A	Not collected
A8	**I**	Brick, fragment	N/A	Not collected
A9	**I**	Refined earthenware, whiteware	1	
A9	I	Brick, fragment	N/A	Not collected
B-9	**I**	Iron fragment	1	Heavily corroded
B-8	**I**	Iron fragment, flat	8	Heavily Corroded
B-8	I	Nail, machine cut	2	
B-8	I	Iron fragment, triangular comglomerate	1	
B-8	I	Iron fragment. Large, potential pulley system	1	
B-8	I	Brick, handmade	1	1391g. 3.93in by 2.83in on measurable sides.
B-7	**I**	Glass, brown bottle with textures stipple on exterior	1	
B-7	I	Glass, colorless vessel	1	Frosted

Provenience	Strat.	Artifact	Qty.	Notes
B-7	I	Iron fragment	1	
B-6	**I**	Iron fragment	2	Heavily corroded
B-6	I	Brick, handmade	2	1g
B-5	**I**	Nail, unidentifiable	4	Heavily corroded
B-4	**I**	Glass, colorless window	1	
B-3	**I**	Glass, colorless vessel.	1	
B-2	**I**	Refined earthenware, Whiteware	1	
B-2	I	Brick, Handmade	1	32g
B-1	**I**	Brick, fragment	N/A	Not collected
B1	**I**	Brick, fragment	N/A	Not collected
B2	**I**	Glass, colorless vessel. Etched palm tree design	1	
B2	I	Coal	**1**	
B2	I	Brick, handmade	1	49g
B3	**I**	Flake, primary	1	Quartz
B3	I	Brick, handmade	1	2g
B4	**I**	Refined earthenware, shell edge whiteware	1	Scalloped rim with impressed lines. 1800-1830
B4	I	Nail, unidentifiable	1	
B4	I	Iron fragment	1	Possibly head to nail shank in same shovel test pit. Heavily Corroded
B5	**Surface**	Porcellaneous plate	1	
B5	**I**	Nail, unidentifiable	2	Dessicated, heavily corroded
B6	**I**	Refined earthenware, whiteware	1	
B6	I	Glass, colorless fragment. Molded with turned edge	1	
C-7	**I**	Brick, fragment	N/A	Not collected
C-6	**I**	Iron fragment	1	
C-5	**I**	Brick, handmade	1	5g
C-4	**I**	Brick, handmade	5	189g
C-3	**I**	Glass, colorless vessel	1	
C-2	**I**	Glass, light blue vessel	1	
C-2	I	Nail, unidentifiable	2	Heavily Corroded
C-1	**Surface**	Glass, aqua bottle	1	
C-1	**I**	Brick, handmade	1	6g
C1	**I**	Glass, colorless vessel	1	
C2	**I**	Ironstone, undecorated	1	

Provenience	Strat.	Artifact	Qty.	Notes
C2	I	Brick, handmade	1	3g
C3	**I**	Nail, unidentifiable	1	
C3	I	Porcelain, hard paste	1	
Surface Collection on Foundation between C3 and C4	**Surface**	Copper alloy, pipe	2	
C4	**I**	Brick, fragment	N/A	Not collected
C5	**I**	Porcelain, hard paste	1	
C6	**I**	Brick, fragment	N/A	Not collected
D-5	**I**	Brick, handmade	3	3g
D-4	**I**	Nail, unidentifiable	1	Dessicated, heavily corroded
D-3	**I**	Refined earthenware, pearlware with handpainted blue design	1	
D-1	**I**	Glass, aqua vessel	1	
D-1	I	Glass, solarized fragment	2	
D-1	I	Glass, solarized vessel	1	Possibly part of lid
D1	**I**	Glass, aqua vessel	1	
D1	I	Glass, colorless vessel	12	
D1	I	Glass, colorless vessel	2	
D1	I	Glass, colorless vessel, embossed "S"	1	
D1	I	Glass, dark green bottle	1	
D1	I	Brick, handmade	5	21g
D1	I	Nail, machine cut or wrought	1	
D1	I	Nail, machine cut or wrought	1	
Surface Collection between D1 and D2	**Surface**	Refined earthenware, utilitarian, white with blue overglaze decoration	1	Possibly creamware or yellowware.
D2	**I**	Glass, brown bottle with flat tooled lip. Rectangular bottle with semicircular cutout on one face	1	
D2	I	Glass, colorless vessel	3	
D2	I	Glass, colorless vessel. Paneled exterior	1	
D2	I	Glass, colorless vessel, threaded jar lip	2	
D2	I	Glass, aqua vessel	1	
D2	I	Glass, aqua window	4	
D2	I	Glass, colorless window with yellow discoloration	2	

Provenience	Strat.	Artifact	Qty.	Notes
D2	I	Iron fragment	3	Possibly just oxidation of now missing iron.
D2	I	Nail, machine cut or wire	2	
D2	I	Nail, unidentifiable	1	Heavily corroded
D2	I	Mortar, sand based	1	4g
D2	I	Brick, handmade	7	78g
D2	I	Porcellaneous, modern utility tile	3	
D2	I	Glass, aqua window	10	
D2	I	Glass, aqua window	11	Thick, some heat exposed and partially melted
D2	I	Glass, aqua window with yellow discoloration	5	Thick, some heat exposed and partially melted
D2	I	Glass, amber bottle	2	
D2	I	Glass, colorless vessel	1	
D2	I	Glass, colorless fragment	5	Thin. Lantern or drinking glass.
D2	I	Glass, colorless vessel	2	Both pieces mend. Embossed H.
D2	I	Glass, colorless vessel	2	
D2	I	Glass, solarized vessel with molded diamond design	1	
D2	I	Glass, colorless fragment	2	Melted
D2	I	Pencil, graphite stick	1	Only graphite. 0.16in diameter
D2	I	Oyster Shell	2	1g
D2	I	Bullet, shell casing	1	.22in
D2	I	Synthetic material, black with regular grooves on both sides	1	
D2	I	Nail, machine cut or wrought	2	
D2	I	Nail, machine cut or wrought	3	
D2	I	Nail, wire	2	
D2	I	Nail, unidentifiable	4	
D2	I	Nail, unidentifiable	4	
D2	I	Iron fragment	15	
D2	I	Brick, handmade	34	71g
D2	I	Mortar, sand based	8	27g
D2	I	Porcellaneous, modern utility tile	1	
D2	I	Glass, aqua vessel	1	

Provenience	Strat.	Artifact	Qty.	Notes
D2	I	Glass, cobalt blue bottle with tooled lip	1	1890-1910
D2	I	Glass, amber vessel	2	
D2	I	Glass, aqua window	5	Thin
D2	I	Glass, aqua window	11	Thick, some heat exposed and partially melted
D2	I	Glass, aqua window with yellow discoloration	7	Thick, some heat exposed and partially melted
D2	I	Glass, colorless vessel	3	
D2	I	Nail, unidentifiable	4	Heavily corroded
D2	I	Iron fragments	5	Possibly just oxidation of now missing iron.
D2	I	Brick, handmade	27	216g
D2	I	Mortar, sand based	5	25g
D2	I	Charcoal	1	Burned stick or cinder
D2	I	Brick, handmade	1	782g. 4in by 2.5in on measurable sides
E-7	**I**	Nail, machine cut	3	
E-7	I	Nail, unidentifiable	1	
E-7	I	Iron fragment	2	Unidentifiable
E-7	I	Brick, handmade	1	2g
E-6	**I**	Brick, fragment	N/A	Not collected
E-5	**I**	Stoneware, gray salt glaze	1	
E-4	**I**	Glass, colorless vessel, wide molded ridge	1	
E-3	**I**	Glass, aqua fragment	1	
E-3	I	Brick, handmade	1	4g, Glazed
E-3	I	Nail, machine cut	1	
E-3	I	Iron fragment	1	
E-2	**I**	Brick, fragment	N/A	Not Collected
E-1	**I**	Brick, fragment	N/A	Not Collected
E1	**I**	Glass, brown bottle	2	
E1	I	Glass, colorless vessel with molded starbursts	1	
E1	I	Brick, fragment	N/A	Not Collected
E2	**I**	Brick, fragment	N/A	Not Collected
E3	**I**	Brick, fragment	N/A	Not Collected

Provenience	Strat.	Artifact	Qty.	Notes
E4	**I**	Brick, fragment	N/A	Not Collected
E5	**I**	Refined earthenware, pearlware or whiteware	1	
E6	**I**	Brick, fragment	N/A	Not Collected
F-6	**I**	Brick, fragment	N/A	Not Collected
F-5	**I**	Brick, fragment	N/A	Not Collected
F-4	**I**	Brick, fragment	N/A	Not Collected
F-3	**I**	Brick, fragment	N/A	Not Collected
F-1	**I**	Brick, fragment	N/A	Not Collected
F1	**I**	Iron fragment, disc	1	
F5	**I**	Brick, handmade	1	21g
G-5	**I**	Glass, brown bottle with molded ridge	1	
H-5	**I**	Brick, fragment	N/A	Not Collected
Area C6 (44SY0319)				
B3	**I**	Nail, wrought	1	
B4	**I**	Glass, solarized	1	
B6	**I**	Brick, fragment	N/A	Not Collected
BC2	**I**	Refined earthenware, whiteware	1	
C1	**I**	Refined earthenware, whiteware	1	
C1	I	Iron fragment	1	Curved, heavily corroded
C1	I	Brick, handmade	1	<1g
C1.5	**I**	Ironstone, undecorated	1	
C1.5	**I**	Brick, fragment	1	2g
D1	**I**	Ironstone, undecorated	1	
D1	I	Glass, amber bottle	1	Not modern beer bottle. Older, with bubbles visible in walls.
D1	I	Glass, colorless vessel	4	
D1	I	Glass, aqua window	1	
D1	I	Glass, colorless fragment	1	Thin. Lantern or drinking glass.
D2	**I**	Refined earthenware, whiteware	1	
D2	I	Refined earthenware, potentially jackfield type	1	
D2	I	Glass, solarized vessel	2	
D2	I	Glass, light blue vessel	1	
D2	I	Glass, bright blue vessel	1	
D2	I	Glass, colorless vessel	1	
D2	I	Glass, opalescent fragment	1	

Provenience	Strat.	Artifact	Qty.	Notes
D2	I	Nail, wrought	2	
D2	I	Nail, machine cut	1	
D2	I	Iron fragments, unidentifiable	2	
D3	**I**	Glass, light blue vessel	1	
E0.5	**I**	Glass, aqua fragment	1	
E1	**I**	Glass, aqua window	1	
E2	**I**	Glass, light green fragment	2	
F0.5	**I**	Iron strap	1	2.5inches long
F1	**I**	Ironstone, undecorated	1	
F1	I	Glass, colorless vessel	1	
F1	I	Nail, machine cut or wrought	1	
F1	I	Brick, handmade	1	9g
G1	**I**	Porcellaneous, modern utility tile	1	
G1	I	Glass, colorless vessel	1	Melted
G1	I	Glass, aqua vessel	1	Melted
G1	I	Glass, aqua vessel	1	
G1	I	Glass, light green fragment	1	Melted
G1	I	Brick, handmade	1	<1g
Area C7 (44SY0320)				
Surface Collection 1	**I**	Projectile point, Palmer	1	Early archaic, quartz
-A6.5	**I**	Glass, brown bottle	1	
-A7	**I**	Glass, colorless vessel	2	
-A7	I	Zinc lid	3	Edge fragments
A1.5	**I**	Glass, Brown bottle	1	
A1.5	I	Brick, handmade	1	8g
A2	**I**	Glass, aqua window	2	
A2	I	Glass, aqua fragment	1	Melted
A2	I	Glass, brown bottle	3	One molded with ridges
A2	I	Glass, colorless bottle	6	
A2	I	Glass, colorless bottle neck	2	One threaded. Mend
A2	I	Glass, colorless bottle neck	1	Threaded screw top
A2	I	Glass, colorless window	1	
A2	I	Iron fragment	2	
A2	I	Iron, fragment with uncorroded decal	1	
A3	**I**	Ironstone, undecorated	1	
A3	I	Ironstone, undecorated	1	
A3	I	Ironstone, undecorated	1	

Provenience	Strat.	Artifact	Qty.	Notes
A3	I	Glass, cobalt blue vessel	1	Threading impressed
A3	I	Glass, colorless jar	1	Threading impressed
A3	I	Glass, colorless vessel	17	
A3	I	Glass, Brown bottle	4	
A3	I	Plastic, blue	1	
A3	I	Nail, wrought	3	
A3	I	Nail, unidentifiable	2	
A3	I	Mortar	1	<1g
A6	**I**	Glass, bright green bottle	1	
A6	I	Glass, milk glass lid liner	1	
A7	**I**	Glass, brown bottle. Embossed "REF.."	1	
B4	**I**	Brick, handmade	1	3g
B4	I	Glass, aqua window glass	3	
B4	I	Glass, colorless vessel	2	
B4	I	Glass, colorless jar	1	Threading impressed
B7	**I**	Glass, brown bottle	2	
B7	I	Nail, wrought	1	
C5	**I**	Iron, fragment	2	Unidentifiable
C5	I	Brick, handmade	2	12g
C6	**I**	Glass, colorless. Jar.	1	Threading impressed
C6	I	Glass, colorless. Jar.	2	
C7	**I**	Glass, brown bottle	2	
C7	I	Glass, colorless window	2	
C8	**I**	Glass, dark green bottle	1	
C8	I	Glass, dark green bottle	3	
D1	**I**	Glass, colorless vessel	1	
D1	I	Brick, handmade	1	1g
DE1	**I**	Plastic, colorless or white bottle	1	
D3	**I**	Brick, handmade	7	9g
D3	I	Safety glass	2	
D5	**I**	Refined earthenware, whiteware with dark blue glaze on one side	1	
D5	I	Fused glass	1	White glass with a layer of colorless glass fused to each side
D5	I	Glass, aqua window glass	3	

Provenience	Strat.	Artifact	Qty.	Notes
D5	I	Glass, colorless window glass	1	
D5	I	Glass, colorless vessel	4	
D5	I	Glass, brown bottle	3	
D5	I	Glass, bright green bottle	1	
D5	I	Glass, bright green bottle, with embossed maker's mark for Whitall Tatum and Co.	1	1938
D5	I	Nail, unidentifiable	3	
D5	I	Nail, unidentifiable	4	
D5	I	Iron fragments	6	
D5	I	Brick, handmade	6	64g
D6	**I**	Glass, aqua window	1	
D6	I	Glass, Solarized vessel	1	
D6	I	Glass, aqua vessel	1	Melted
D6	I	Glass, colorless safety glass vessel	1	
D6	I	Nail, machine cut or wrought	1	
D6	I	Nail, unidentifiable	1	Heavily corroded
D6	I	Iron strap fragment	1	
D8	**I**	Iron machine part	1	Three armed machine part with central stake. Unclear use.
E1.5	**I**	Glass, colorless vessel	1	
E1.5	I	Plastic, wrapper or flagging tape.	1	
E1.5	I	Brick, handmade	3	3g
E2	**I**	Glass, colorless vessel or lantern	1	
E2.5	**I**	Glass, milk glass jar with threaded lip	1	
E3	**I**	Ironstone, undecorated	3	
E3	I	Ironstone, undecorated	1	
E3	I	Glass, colorless vessel	3	
E3	I	Glass, colorless vessel	1	Threaded
E3	I	Glass, aqua window	4	
E3	I	Glass, colorless lantern or wine glass	5	Very thin
E3	I	Glass, peach lantern or wine glass	1	Very thin
E3	I	Nail, unidentifiable	2	Machine cut or wire
E3	I	Brick, handmade	1	217g
E4	**I**	Stoneware, magenta or plum colored glaze	1	
E4	I	Glass, solarized vessel	4	
E4	I	Glass, colorless bottle	1	

Provenience	Strat.	Artifact	Qty.	Notes
E4	I	Glass, colorless bottle	1	
E4	I	Glass, colorless lantern	1	
E4	I	Glass, colorless vessel	1	Melted
E4	I	Glass, brown bottle	3	
E4	I	Glass, brown bottle, embossed with empty keystone, and "61"	1	Probably Knox Glass Bottle Co. (1932-1968)
E4	I	Handle, silverplated	1	Heavily corroded
E4	I	Iron, fragment	1	
E4	I	Nail, machine cut	3	
E5	**I**	Glass, colorless vessel	1	
E6	**I**	Glass, Aqua window	1	
E6	I	Glass, Colorless window	1	
F3	**I**	Glass, colorless bottle.	1	
F3	I	Nail, wrought	1	
F3	I	Brick, handmade	4	12g
F4	**I**	Glass, aqua vessel	1	
F4	I	Glass, colorless vessel	2	
F4	I	Glass, brown bottle	1	
F4	I	Glass, brown bottle	1	Molded threading
F4	I	Nail, unidentifiable	3	Heavily corroded
F4	I	Nail, unidentifiable	2	Heavily corroded
F5	**I**	Glass, colorless window.	1	
F5	I	Glass, solarized vessel.	1	
F5	I	Nail, wire	1	
F6	**I**	Brick	1	<1g
F7	**I**	Glass, solarized vessel.	1	
F7	I	Brick, handmade	2	3g
G3	**I**	Glass, aqua window	1	
G3	I	Nail, machine cut or wire	1	
H1.5	**I**	Glass, aqua window	1	
H2	**I**	Stoneware, bristol glaze with albany slip	1	Utilitarian jug
Area C8 (44SY0321)				
A-3	**I**	Brick, fragment	N/A	Not Collected
B1	**I**	Ironstone, undecorated	1	
C-2	**I**	Brick, fragment	N/A	Not Collected
Area C9 (44SY0322)				
Surface Collection 1	**Surface**	Clay, pipe stem.	1	4/64ths bore diameter. 1750-1800

Provenience	Strat.	Artifact	Qty.	Notes
Surface Collection 2	**Surface**	Porcelain, bisque. Doll or figure arm.	1	Left Arm, holding something in the hand.
Surface Collection 3	**Surface**	Porcelain, european hard paste. Molded rim	1	
Surface Collection 3	Surface	Porcelain, european hard paste. Overglaze floral design with gilt edging	1	
Surface Collection 3	Surface	Brick, handmade	1	3g
Surface Collection 4	**Surface**	Stoneware, clear lead glaze with interior salt glaze. Brown linear decoration	1	
Surface Collection 4	Surface	Glass, cobalt blue jar. Embossed "VAPORUB"	1	
Surface Collection 4	Surface	Glass, milk glass lid liner. Embossed "WHIT.."	1	
Surface Collection 5	**Surface**	Coin, Lincoln wheat penny, 1946	1	
Surface Collection 6	**Surface**	Ironstone, printed maker's mark for the Hopewell China Company	1	1922-1938
Surface Collection 7	**Surface**	Rubber, cap	1	Embossed "1 3/8 LOCKHE… MADE IN USA" and "YA/H"
Surface Collection 8	**Surface**	Projectile point, quartzite	1	12mm wide, 6.5mm thick. Serrated edge. Part of a thin, long point.
Surface Collection 9	**Surface**	Projectile point, Halifax	1	Middle to late archaic
Surface Collection 10	**Surface**	Prehistoric core, random flaking pattern, incomplete	1	
Surface Collection 11	**Surface**	Flake, Secondary	1	
Surface Collection 11	Surface	Projectile point, stem	1	22.5mm wide and 21.7mm long, 8.0mm thick
Area D1 (44SY0323)				
Surface Collection 1	**Surface**	Glass, solarized bottle. Collar lip with seam stopping halfway up neck	1	
Surface Collection 1	Surface	Oyster shell	1	11g

Provenience	Strat.	Artifact	Qty.	Notes
Surface Collection 2	**Surface**	Refined earthenware, pearlware	1	Molded waved design
Surface Collection 3	**Surface**	Stoneware, brown and black lead glaze	1	
Surface Collection 4	**Surface**	Refined earthenware, whiteware with handpainted red flowers	1	Post 1830
Surface Collection 5	**Surface**	Stoneware, bristol glaze with albany slip	3	Utilitarian vessel
Area D2 (44SY0324)				
Surface Collection 1	**Surface**	Glass, light blue vessel	1	
Surface Collection 1	Surface	Glass, milk glass vessel	1	
Surface Collection 1	Surface	Glass, milk glass vessel	1	
Surface Collection 1	Surface	Porcelain, undecorated. Chinese	1	
Surface Collection 1	Surface	Glass, colorless bottle. Owens-Illinois make	1	Post 1915
Surface Collection 2	**Surface**	Stoneware. Blue glaze with molded design	1	Likely mixing bowl
Surface Collection 2	Surface	Stoneware, gray salt glaze.	1	
Surface Collection 2	Surface	Refined earthenware, whiteware with molded swags	1	
Surface Collection 2	Surface	Glass, bright blue vessel	1	
Surface Collection 2	Surface	Glass, aqua vessel	1	
Surface Collection 3	**Surface**	Glass, brown bottle. Keystone shaped maker's mark with K inside.	1	Knox Glass Bottle Co., 1932-1968
Surface Collection 4	**Surface**	Refined earthenware, whiteware. Blue shell edge	1	
Surface Collection 5	**Surface**	Stoneware, bristol glaze	1	Utilitarian vessel
Surface Collection 6	**Surface**	Stoneware. Blue glaze with molded hexagon pattern	1	Likely mixing bowl
Surface Collection 7	**Surface**	Glass, dark green bottle	1	
Surface Collection 8	**Surface**	Refined earthenware, whiteware. Flow blue	1	
Surface Collection 8	Surface	Refined earthenware, whiteware. Handpainted floral	1	Polychrome or sprig painted.

Provenience	Strat.	Artifact	Qty.	Notes
Surface Collection 9	**Surface**	Porcelain electric insulator, Embossed "..USA"	1	
Surface Collection 10	**Surface**	Porcelain electric insulator, Embossed "WP 5 USA"	1	
Area D3				
Surface Collection 1	**Surface**	Prosser button. Four hole.	1	17.3mm diameter
Area D3 (44SY0325)				
Surface Collection 2	**Surface**	Stoneware, Bristol glaze with albany slip	1	
Surface Collection 3	**Surface**	Glass, bright blue bottle. Molded starburst decoration.	1	
Surface Collection 4	**Surface**	Refined earthenware, whiteware	1	
Surface Collection 4	Surface	Stoneware, white lead glaze	1	Utilitarian or crock
Surface Collection 4	Surface	Stoneware, Green alkaline glaze	1	Black interior glaze
Surface Collection 4	Surface	Glass, bright blue vessel	1	
Surface Collection 5	**Surface**	Prosser button. Four hole.	1	Roughly 8.6mm diameter
Surface Collection 6	**Surface**	Refined earthenware, whiteware	1	
Surface Collection 6	Surface	Glass, cobalt blue fragment	1	
Surface Collection 7	**Surface**	Glass, dark green bottle	1	
Surface Collection 7	Surface	Glass, solarized window	1	
Surface Collection 7	Surface	Porcelain, chinese with blue handpainted underglaze decoration.	1	
Surface Collection 8	**Surface**	Glass, milk glass lid. Embossed "Cleveland"	1	
Surface Collection 9	**Surface**	Glass, colorless. Reeded face with molded reverse.	1	Notably purpose built but unclear use
Surface Collection 10	**Surface**	Stoneware, clear lead glaze with ridged decoration	1	Possibly pipe bowl?
Area E1				
A2	**I**	Stoneware, gray salt glaze	1	

APPENDIX C: VCRIS FILES

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.290
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

This site consists of a scatter of late-nineteenth through early-twentieth century artifacts. A total of 39 artifacts were recovered. These materials consisted of a few brick and mortar fragments; a fragment of oyster shell; a machine cut nail, iron fragments (N=3); vessel glass (N=15), including solarized, light blue, aqua, cobalt, and colorless types; window glass (N=8); a milk glass lid liner, ironstone (N=3), Bristol glazed stoneware (N=1); a fragment of a bisque figurine; and a Prosser button. One quartzite flake was also recovered.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: Due to its late date and the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 5.120
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

A diffuse scatter of small brick and whiteware fragments.

Current Curation Repository: No Data

Permanent Curation Repository: No Data

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: Due to the diffuse nature of the scatter, the small quantity of artifacts, and the lack of surface features, this site offers little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 1866 - 1916, 1917 - 1945, 1946 - 1991
Site Type(s): Farmstead
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.910
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Farmstead
Cultural Affiliation: Indeterminate
DHR Time Period: Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:

No Data

Informant Data:

No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

A total of 53 artifacts were recovered from 11 shovel tests. These materials date from the late-nineteenth through early-twentieth century and include: window glass (N=20); brick fragments (N=3); plaster fragments (N=5); a fragment of coal; iron hardware fragments (N=15); oyster shell (N=2); colorless vessel glass (N=3); and a sherd each of whiteware, ironstone, and Albany slip stoneware.

Summary of Specimens Observed, Not Collected:

Similar materials were observed on the surface but not collected.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement:

This site consists of a group of ruined structures located within a wooded area in Area A1. These ruins correspond with a dwelling labeled “Wilson” on the 1863 map and a dwelling depicted on the 1919 map. The setting remains much as it did on the 1919 topographic map, with a driveway leading through an agricultural field from White Marsh Road to a complex of buildings at the edge of a wooded wetland.

Vegetation around the site consisted of mature cedar and oak with an understory of briars and vines. Ornamental plants were scattered around the area, including privet, yucca, tulips, and daffodils. Structural remains consisted of collapsed sheds, a small collapsing structure with a chimney, and a tall standing chimney associated with the main dwelling.

This farmstead appears to have been occupied from the 1860s through the 1960s. It is in ruined condition and does not possess integrity as an architectural resource. Due to the later additions and the late-twentieth century material, archaeological evidence from earlier occupation is likely to have been destroyed. Therefore, this site possesses little potential to provide new or significant archaeological data, and it is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations:	No Data
Surveyor's NR Criteria Considerations:	No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.820
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

A total of 12 artifacts were recovered, including nails (N=2, both cut and unidentifiable), iron fragments (N=4), a fragment of brick, a sherd of ironstone, and a sherd of whiteware.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consists of a cluster of positive shovel tests. Volunteer yucca plants were observed growing between rows; they had likely been propagated or displaced from ornamental plants originally planted around a dwelling. No other evidence of a dwelling was observed, and the disturbance from planting the trees appears to have more or less destroyed the site.

Due to its extensive disturbance, the small number of artifacts, and its late date, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: BACONS CASTLE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 3.020
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Only a sample of the artifacts were collected, including whiteware, ironstone, window glass, and the body of a pharmaceutical bottle labeled "TAYLOR DRUG, RICHMOND VA" that could be dated from 1890 to at least 1931

Summary of Specimens Observed, Not Collected:

Similar artifacts were observed but not collected

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consists of a scatter of late-nineteenth through early-twentieth century artifacts observed on the surface of a recently clearcut area. The scatter measured approximately 30 meters by 15 meters. Only a sample of the artifacts were collected, including whiteware, ironstone, window glass, and the body of a pharmaceutical bottle labeled "TAYLOR DRUG, RICHMOND VA" that could be dated from 1890 to at least 1931.

Due to its heavy disturbance and the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.230
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

This site consists of a diffuse scatter of early-twentieth century domestic artifacts, mostly brick fragments. One fragment each of colorless, light blue, and solarized vessel glass was recovered, plus an unidentifiable nail and a sherd of Bristol-glazed stoneware with Albany slip.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: D+A

Field Notes: Yes

Field Notes Repository: To be determined by client

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: Due to the diffuse nature of the archaeological deposits and the late date of the site, Field Site 5 has little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): , 1866 - 1916
Site Type(s): Artifact scatter, Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 2.450
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Component 2

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Native American
DHR Time Period: Pre-Contact
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data

Informant Data:
No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Historic artifacts consisted of: brick fragments (N=38); nails (N=12, type unidentifiable); iron fragments (N=6); window glass (N=1); vessel glass (N=8), including amber, colorless, solarized, and dark purple types; ironstone ceramic (N=2); Bristol glazed stoneware with Albany slip (N=1); porcelain (N=1); and a toy marble. Prehistoric materials consisted of lithic debitage (N=3) and a broken triangular projectile point.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: No

Field Notes Repository: No Data

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This is a late-nineteenth or early-twentieth century site with a small prehistoric component. The remains of a frame structure were also noted in this site. These remains consisted of a collapsed roof with sheet metal roofing. Most of this was covered in leaves and fallen branches, and it was difficult to determine whether the materials were associated with a dwelling or outbuilding.

Due to the small quantity of late-dating artifacts that were recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945, 1946 - 1991
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: No Data
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 3.830
Landform: Other
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

A total of 223 artifacts were recovered, which were typical of an early-to-mid twentieth century domestic site. Materials recovered included handmade brick fragments (N=26); machine cut and unidentifiable nails (N=18); iron fragments (N=21); window glass (N=14); vessel glass, including colorless, aqua, brown, bright green, dark green, cobalt, and milk glass (N=135); ceramics, including whiteware, porcelain, and gray and brown stoneware (N=11); plastic and synthetic fragments (N=5), including an orange four-hole button; a Pepsi bottle cap dated to 1962-1972; and a 1969 penny.

Summary of Specimens Observed, Not Collected:

Similar materials were observed on the nearby farm road but not collected.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site was depicted on the 1919 map, and its presence was noted during the assessment in the form of a scatter of surface artifacts noted on the farm road to the southeast of the area. The 1966 aerial shows a farm complex in the location of this site, and the date of the artifacts suggests that the farmstead was occupied a few years after this date. Due to this mid-to-late twentieth century date, the site offers little potential for new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 2.970
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

A total of 141 artifacts were recovered from Field Site 8. These materials were typical of a late-nineteenth or early-twentieth century dwelling. Artifacts included handmade brick and mortar, only a sample of which was collected; machine cut, wrought, and unidentifiable nails (N=71); a fragment of plaster; window glass (N=5); iron hardware and fragments (N=8); vessel glass (N=30), including colorless, brown, aqua, and solarized glass; ceramic (N=11), including porcelain, whiteware, ironstone, and Bristol glazed stoneware; and bone and oyster shell (N=4).

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site is the location of a structure depicted on the 1919 map. Aerial imagery indicates that a farmhouse was still standing in this location in 2011; in 2013 the structure had been demolished. Portions of the brick foundation and chimney fall remain. This site is one of the many turn of the twentieth century farmsteads that are depicted on the 1919 map of the study area. However, all of these sites but this one have either been disturbed or are too ephemeral to provide significant archaeological data. As the best surviving example of a farmstead within this vanished community, this site is recommended potentially eligible for inclusion in the NRHP for its potential to provide significant data about life in this region during the turn of the twentieth century. D+A recommends avoidance. If avoidance is not possible, Phase II evaluation to determine the extent and integrity of the deposits is recommended.

Surveyor's Eligibility Recommendations: Recommended Potentially Eligible

Surveyor's NR Criteria Recommendations: D

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1790 - 1829, 1830 - 1860, 1861 - 1865, 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.460
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Diagnostic material from this site exhibited a wide date range from the mid-eighteenth through the early-twentieth century. Artifacts recovered consisted of handmade brick and sand mortar, most of which was not collected (a sample of 15 fragments was collected); cut and unidentifiable nails (N=4); window glass (N=4); iron chain and other iron fragments (N=12); vessel glass (N=15), including dark green, aqua, colorless, solarized, and milk glass; ceramics (N=16), including Westerwald, shell-edged ware, whiteware, brown and gray salt-glazed stoneware, and ironstone; a fragments of shoe leather with eyelets, and oyster shell fragments (N=12).

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site is in the location of two structures depicted on the 1919 map. It consists of a scatter of early-to-late nineteenth century domestic artifacts and a small family cemetery with one marker commemorating “Mary Person” who died in 1829 (Figure 7-69). Some surface artifacts were noted. One shovel test contained large quantities of handmade brick, suggesting a chimney fall, and another exhibited a cultural fill layer beneath subsoil, suggesting a possible feature.

Although disturbance and dense vegetation prevented extensive testing in this area, the artifacts recovered from this site cover a wide date range from the mid-eighteenth century to the early-twentieth century. The early occupation of this site is further supported by the presence of a grave dating to 1829. Due to presence of the grave and the early date of the materials, additional evaluation is recommended to determine the site’s potential for eligibility for the NRHP. Avoidance or Phase II evaluation is recommended.

Surveyor's Eligibility Recommendations: Recommended Potentially Eligible

Surveyor's NR Criteria Recommendations: D

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.540
Landform: Marsh
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Other	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

A total of 17 artifacts were recovered, including brick fragments (N=4); machine cut, wrought, and unidentifiable nails (N=4); window glass (N=2); colorless, aqua, and cobalt vessel glass (N=3), including a fragment of a Vaseline jar dating to 1918-1938; an iron buckle; ironstone (N=3); and a prehistoric stone blade.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consisted of ten positive shovel tests in the approximate location of a building depicted on the 1919 map. No features were noted. Due to its ephemeral nature, this site has little archaeological research potential and is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.260
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts were typical of an early-twentieth century domestic site and consisted of window glass (N=2); aqua and colorless vessel glass (N=6); whiteware (N=3); and an iron ring bearing.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site is a small cluster of four positive shovel tests located in the vicinity of two standing outbuildings that were likely associated with a now-demolished structure depicted on the 1919 map. Due to the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.230
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Artifacts consisted of a few sherds of undecorated whiteware, shell-edged whiteware, and clear vessel glass. Only the shell-edged ware was collected.

Summary of Specimens Observed, Not Collected:

Artifacts not collected consisted of a few sherds of undecorated whiteware, shell-edged whiteware, and clear vessel glass.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consisted of a small scatter of late-nineteenth artifacts observed on the surface of an agricultural field. Due to the lack of surface features and the small number of artifacts observed, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.080
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing, Historic Map Projection

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

This site was a surface scatter of late-nineteenth century artifacts, including transferware, colorless glass, olive glass, and undecorated whiteware.

Current Curation Repository: No Data

Permanent Curation Repository: No Data

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site was a surface scatter of late-nineteenth century artifacts that was observed during pedestrian survey. Due to the lack of surface features and the small quantity of artifacts observed, this site offers little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.120
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Iron fragments, whiteware, and colorless glass were observed on the ground surface but not collected.

Current Curation Repository: No Data

Permanent Curation Repository: No Data

Field Notes: No

Field Notes Repository: No Data

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: Due to the lack of surface features and the small quantity of artifacts observed, this site offers little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 5.770
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts include brick fragments (most of which were not collected); window glass (N=5); machine cut or wrought nails (N=5); an agateware doorknob; vessel glass (N=52), including colorless, aqua, solarized, brown, dark green, and milk glass; ceramics (N=44), including whiteware, ironstone, porcelaneous, and Albany slip stoneware.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site corresponds with a structure depicted on the 1919 map of the area. It consists of a wide scatter of early-twentieth century materials. . No features were observed, and the artifacts were scattered across the field as if the dwelling had been pushed down and plowed under. Due to the diffuse spread of the artifacts, the apparent disturbance to the site, and the late date of the materials, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.760
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts included brick fragments (N=2); wire and unidentifiable nails (N=5); window glass (N=2); vessel glass (N=10), including brown, colorless and solarized, with brown bottles and a milk bottle; ceramics (N=7), including ironstone, porcelaneous, and gray saltglazed stoneware; a steel mesh fragment, and synthetic material (N=1).

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consists of a scatter of early-to-mid twentieth century materials associated with an early-twentieth century house and outbuildings . Due to the small number of late-dating artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 9.290
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Artifacts consisted of brick, most of which was not collected; mortar (N=15); unidentifiable nails (N=73); iron fragments (N=62); window glass (N=53); porcelaneous tile (N=4); vessel glass (N=108), including amber, aqua, brown, cobalt, colorless, dark green, and solarized glass; ceramics (N=21), including ironstone, hard paste porcelain, whiteware, green transferware, pearlware, and edgeware; copper alloy pipe; and a copper alloy clock gear .

Summary of Specimens Observed, Not Collected:

Brick fragments

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consists of a dense concentration of artifacts in the location of a structure depicted on a 1919 topographic map. Aerial imagery indicates that this structure was demolished and removed from the landscape at some point between 1994 and 2003. Due to the disturbed nature of the deposits and the late date of the materials, this site possesses little potential to provide new or significant archaeological data. It is therefore recommended not eligible for inclusion in the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.550
Landform: Other
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts consisted of brick fragments (N=5); nails, both wrought and machine cut (N=5); iron fragments (N=3); window glass (N=2); vessel glass (N=22), including amber, aqua, colorless, bright blue, opalescent, and solarized glass; and ceramics (N=7), mostly whiteware and ironstone .

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site is a scatter of late-nineteenth through early-twentieth century artifacts that corresponds with a structure depicted on the 1919 map. Due to the level of disturbance, the late date of the materials, and the small number of artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: No Data
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 2.240
Landform: Other
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts included brick fragments (N=29); a mortar fragment; wrought, cut, wire, and unidentifiable nails (N=28); window glass (N=22); iron fragments (N=14); vessel glass (N=107), including dark green, colorless, aqua, brown, solarized, cobalt, bright green, and safety glass; stoneware, including Albany slip (N=2); ironstone (N=7); plastic fragments (N=3), a zinc canning lid; and a silver plated utensil handle. Two vessel glass fragments had maker's marks that could be dated to 1938 and 1932-1968.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consisted of a large, dense cluster of positive shovel tests surrounding surface expressions indicative of a twentieth century house site, including two large, mature hardwoods, a graded area, and a residential powerline. No surface features were noted, but one shovel test exhibited complex stratigraphy with multiple thin strata that likely indicates a destruction layer. Due to the disturbed nature of the deposits and the late date of the materials, this site has little potential to provide new or significant archaeological data and is recommended not eligible for the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Outbuilding
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.370
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Outbuilding
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts consisted of a sherd of ironstone and two fragments of brick .

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consisted of a cluster of positive shovel tests associated with a collapsed outbuilding. Due to the lack of material, this site is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): , 1866 - 1916, 1917 - 1945, 1946 - 1991
Site Type(s): Artifact scatter, Lithic scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 3.770
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)
Start Year: No Data
End Year: No Data
Comments: No Data

Component 2

Category: Industry/Processing/Extraction
Site Type: Lithic scatter
Cultural Affiliation: Native American
DHR Time Period: Pre-Contact
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:

No Data

Informant Data:

No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Historic artifacts included a milk glass lid liner, a cobalt glass Vaporub jar, a porcelain doll arm, a 1946 penny, and ironstone with a maker's mark dating to 1922-1938. An isolated kaolin pipe stem was recovered, but no other early historic artifacts were noted. Prehistoric artifacts included a Halifax projectile point, the tip of a point, and lithic debitage.

Summary of Specimens Observed, Not Collected:

Similar artifacts were observed but not collected.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This is a multicomponent site consisting of a few prehistoric artifacts near the end of the landform and a wide scatter of late-nineteenth and early twentieth century material, including architectural and domestic artifacts. Only a representative sample of material was collected. The historic component of this site is recommended not eligible for the NRHP due to the mid-twentieth century date of its materials. The prehistoric component of this site is recommended not eligible for the NRHP due to the small quantity of materials recovered

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 1866 - 1916, 1917 - 1945
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.980
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Only a representative sample of artifacts were collected. These consisted of a solarized glass bottle lip, Bristol glazed and Albany slip stoneware, a molded pearlware handle, sponge-decorated whiteware, and oyster shell.

Summary of Specimens Observed, Not Collected:

Mid-nineteenth through twentieth-century artifacts were observed on the ground surface but not collected.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consists of a scatter of mid-nineteenth through twentieth century artifacts surrounding the remnants of the foundation of a recently demolished house. Due to the disturbance caused by the recent demolition and removal of the structure, this site lacks stratigraphic integrity. Therefore, it possesses little potential to provide new or significant archaeological data and is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1917 - 1945, 1946 - 1991
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.630
Landform: Terrace
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Only a representative sample of material was collected. Artifacts consisted of vessel glass (N=8), including aqua, bright blue, light blue, and milk glass, Knox Bottle Company glass with a date range of 1932-1968, and a post-1915 Owens-Illinois bottle; porcelain electric insulators (N=2); whiteware (N=4), including flow blue, molded, handpainted polychrome, and shell edge; porcelain (N=1); and stoneware (N=4).

Summary of Specimens Observed, Not Collected:

Similar twentieth-century artifacts were observed but not collected.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This is a late-nineteenth through early-twentieth century domestic site that corresponds with a structure depicted on the 1919 topographic map. Pushpiles and architectural debris indicate that this structure was demolished and removed from the landscape relatively recently. Due to the disturbance caused by the recent demolition and removal of the structure, this site lacks stratigraphic integrity. Therefore, it possesses little potential to provide new or significant archaeological data and is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.230
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Agricultural field	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Surface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Only a representative sample of surface artifacts were collected. These materials were typical of a late-nineteenth through early-twentieth century domestic site. Artifacts collected included vessel glass, including bright blue bottle glass with molded decoration, colorless molded glass, cobalt glass, dark green bottle, and milk glass; window glass; a Prosser buttons (N=1); ceramics (N=7, including whiteware, Bristol glazed stoneware, porcelain, and alkaline stoneware).

Summary of Specimens Observed, Not Collected:

Similar turn of the twentieth century artifacts were observed but not collected.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This turn of the twentieth century dwelling site is depicted on the 1919 map of the area, and it appears to have been cleared from the landscape relatively recently. Due to the disturbance caused by the recent demolition and removal of the structure, this site lacks stratigraphic integrity. Therefore, it possesses little potential to provide new or significant archaeological data and is recommended not eligible for inclusion in the NRHP.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: November 23, 2020

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916
Site Type(s): Artifact scatter
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RUNNYMEDE
County/Independent City: Surry (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.370
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
DHR Time Period: Reconstruction and Growth (1866 - 1916)
Start Year: No Data
End Year: No Data
Comments: No Data

Bibliographic Information

Bibliography:
No Data
Informant Data:
No Data

Archaeological site data is protected under the Archaeological Resource Protection Act (ARPA 1979).

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Hope Smith

Survey Date: 4/23/2020

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic shovel testing was conducted in accordance with an approved testing plan based on a probability model. High potential areas were systematically shovel tested or pedestrian surveyed, with shovel test placement avoided in areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water-saturated soils at the time of the survey. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

Current Land Use	Date of Use	Comments
Forest	4/23/2020	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

This site consisted of a concentration of late-nineteenth or early-twentieth century domestic material. Artifacts consisted of a few brick fragments which were not collected, whiteware (N=3), and unidentifiable nails (N=3) .

Summary of Specimens Observed, Not Collected:

Brick fragments were not collected.

Current Curation Repository: D+A

Permanent Curation Repository: To be determined by client

Field Notes: Yes

Field Notes Repository: D+A

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Phase I Cultural Resource Survey of the ±2,106.02-Hectare (±5,204.1-Acre) Cavalier Solar Study Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site consisted of a concentration of late-nineteenth or early-twentieth century domestic material. The site had been disturbed by repeated timber harvesting, and shovel tests exhibited an eroded soil profile. Due to the degree of logging disturbance and the late date and small quantity of the artifacts recovered, this site possesses little potential to provide new or significant archaeological data. Therefore, it is recommended not eligible for the NRHP, and no further consideration is warranted.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

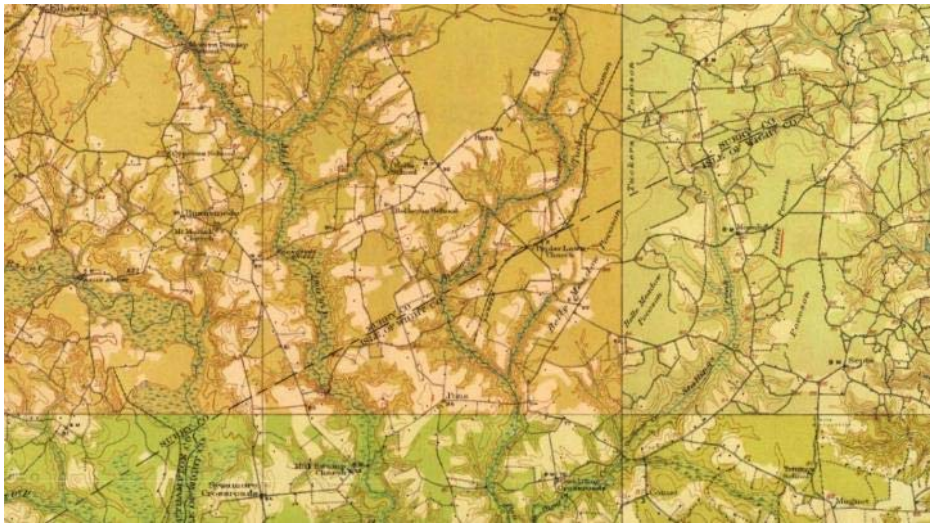
REPORT >

Phase I Architectural Resource Survey of the Cavalier Solar Study Area

LOCATION > Isle of Wight and Surry Counties, Virginia

DATE > October 2020

PREPARED FOR >
sPower



PREPARED BY >
Dutton + Associates, LLC

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE I ARCHITECTURAL RESOURCE SURVEY OF THE CAVALIER SOLAR STUDY AREA ISLE OF WIGHT AND SURRY COUNTIES, VIRGINIA

PREPARED FOR:
SPOWER
4200 INNSLAKE DRIVE
SUITE 302
GLEN ALLEN, VIRGINIA 23060

***PREPARED BY*:**
DUTTON + ASSOCIATES, LLC
1115 CROWDER DRIVE
MIDLOTHIAN, VIRGINIA 23113
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PRINCIPAL INVESTIGATOR
ROBERT J. TAYLOR, JR., M.A.

OCTOBER 2020

ABSTRACT

In December 2019, Dutton +Associates, LLC (D+A) conducted a Phase I architectural resource survey (Phase I) of the Cavalier Solar Study Area in Isle of Wight and Surry Counties, Virginia, with additional work and update conducted in September 2020. The D+A effort is intended to provide documentation and assessment of architectural resources within and in the vicinity of the project area to make recommendations as to whether they may be potentially eligible for listing in the National Register of Historic Places (NRHP) and assess those that are considered NRHP-eligible for project impacts. The survey was conducted in support of an application to the State Corporation Commission (SCC).

The study area consists of contiguous and discontiguous parcels spanning the border of Isle of Wight and Surry counties. Major roads that run adjacent and through the study area include White Marsh Road (Route 617), Stallings Creek Drive, Burwells Bay Road (Route 621), Mill Swamp Road (Route 626), Jones Drive and Beechland Road (Route 626). Because of the immense size of the study area, it has been divided into five specific areas using major roads and parcel boundaries that may be referenced throughout the text. The study area defined here may not correspond precisely with the boundaries chosen for the final development project. Rather, the study area represents the maximum extent of the parcels being considered for development, and the final project area may be smaller than the current study area.

The architectural resources survey for the Cavalier Solar Project resulted in the identification and recordation of fifty-eight (58) architectural resources greater than 50 years of age (constructed in 1970 or earlier) located within the one-half mile architectural survey area, eleven (11) of which are located within the project area. Of the surveyed resources, nine (9) were previously recorded (VDHR# 046-0064/0067, 046-0069, 090-0053, 090-0055, 090-0058, 090-0059) and forty-nine (49) were newly recorded during this Phase I Survey (VDHR# 046-5548/5569, 090-5146/5168, 090-5171/5174). Three of the previously recorded sites were found to have been demolished (VDHR# 090-0053, 090-0055, and 090-0059), and one has been relocated out of survey area and renumbered (VDHR# 046-0067 now VDHR# 046-5258). The surveyed resources consist primarily of domestic buildings and farmsteads from the late-eighteenth to mid-twentieth century. Also surveyed were a number of isolated agricultural buildings not associated with a standing dwelling, as well as several small rural cemeteries. ***Five of the surveyed resource represent early settlement and agricultural development in the region, and are considered potentially NRHP-eligible.*** *The rest of the surveyed resources reflect national trends in building styles and do not appear to reflect any unique or significant design or historical associations, and as such, are recommended to be not eligible for listing in the NRHP individually or collectively.*

The five potentially NRHP-eligible resources were both assessed for impacts brought about by the project through inspection of existing conditions and viewshed analysis. This effort found that existing vegetation, treelines, and intervening development will provide screening of the project area from three of the resources (Carroll House: #046-0064, Gale House #046-0066, and Delk Farm #046-0069), and supplemental landscape buffer to be planted as part of the project will provide screening from one other resource (11231 Mill Swamp Road #046-5566). As such, the project will likely not be visible from these resources themselves or most public vantage points near them and is therefore not anticipated to introduce any substantially different components into

*their viewsheds and is recommended to pose no more than a **minimal impact** to these resources. One resource (Jones House: #046-0065) is located directly within the project study area and improvements are proposed to take place on the landscape surrounding the property, but not within the homesite itself. The historic setting of this resources are already partially compromised by the presence of an existing high-voltage transmission line, however, the project still has the potential to introduce new and noncompatible features. Visibility from both the property and the public ROW in front will be minimized by proposed landscape screening to be planted along the road and around the homesite, and therefore, the project has the potential to pose a **moderate impact** to this resource. A table of NRHP-eligible resources with recommendations regarding project impacts is provided in Table 7-1 below.*

Table of NRHP-eligible architectural resources with recommendations of project impacts

VDHR ID#	*Resource Name/Address*	*Year Built*	*NRHP Eligibility*	*Project Impacts*
046-0064	*Carroll House, 11150 Burwells Bay Road*	*c.1812*	*VDHR: NRHP-Eligible*	*Minimal Impact*
046-0065	*Jones House, 9355 Burwells Bay Road*	*1780*	*Recommended Potentially NRHP-Eligible*	*Moderate Impact*
046-0066	*Gale Farm, 9310 Jones Drive*	*1798*	*Recommended Potentially NRHP-Eligible*	*Minimal Impact*
046-0069	*Delk Farm, 10114 Mill Swamp Road*	*1775*	*Recommended Potentially NRHP-Eligible*	*Minimal Impact*
046-5566	*House, 11231 Mill Swamp Road*	*1790*	*D+A: Potentially NRHP-Eligible*	*Minimal Impact*

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1. INTRODUCTION

In December 2019, Dutton +Associates, LLC (D+A) conducted a Phase I architectural resource survey (Phase I) of the Cavalier Solar Study Area in Isle of Wight and Surry Counties, Virginia, with additional work and update conducted in September 2020. The D+A effort is intended to provide documentation and assessment of architectural resources within and in the vicinity of the project area to make recommendations as to whether they may be potentially eligible for listing in the National Register of Historic Places (NRHP) and assess those that are considered NRHP-eligible for project impacts. The survey was conducted in support of an application to the State Corporation Commission (SCC).

All research, fieldwork, and recording conducted as part of these investigations will conform to the guidance 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 Virginia Department of Historic Resources' (VDHR) *Guidelines for Conducting Historic Resources Survey in Virginia* (rev. 2017). Principal investigators meet the Secretary of the Interior's Professional Qualification Standards (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture. Architectural resource investigations were conducted under the direction of Robert J. Taylor, Jr. M.A who also served as the Principal Investigator. Additional research and context development was prepared by Research Historian Dara Friedberg, M.S.. Copies of all field notes, maps, correspondence, and research materials are on file at D+A's main office in Midlothian, Virginia.

PROJECT LOCATION

The study area consists of contiguous and discontiguous parcels spanning the border of Isle of Wight and Surry counties in the vicinity of Delk Crossroads (Figure 1-1). Major roads that run adjacent and through the study area include White Marsh Road (Route 617), Stallings Creek Drive, Burwells Bay Road (Route 621), Mill Swamp Road (Route 626), Jones Drive and Beechland Road (Route 626) (Figure 1-2). Because of the immense size of the study area, it has been divided into five specific areas using major roads and parcel boundaries that may be referenced throughout the text (Figure 1-3).

The study area defined here may not correspond precisely with the boundaries chosen for the final development project. Rather, the study area represents the maximum extent of the parcels being considered for development, and the final project area may be smaller than the current study area.

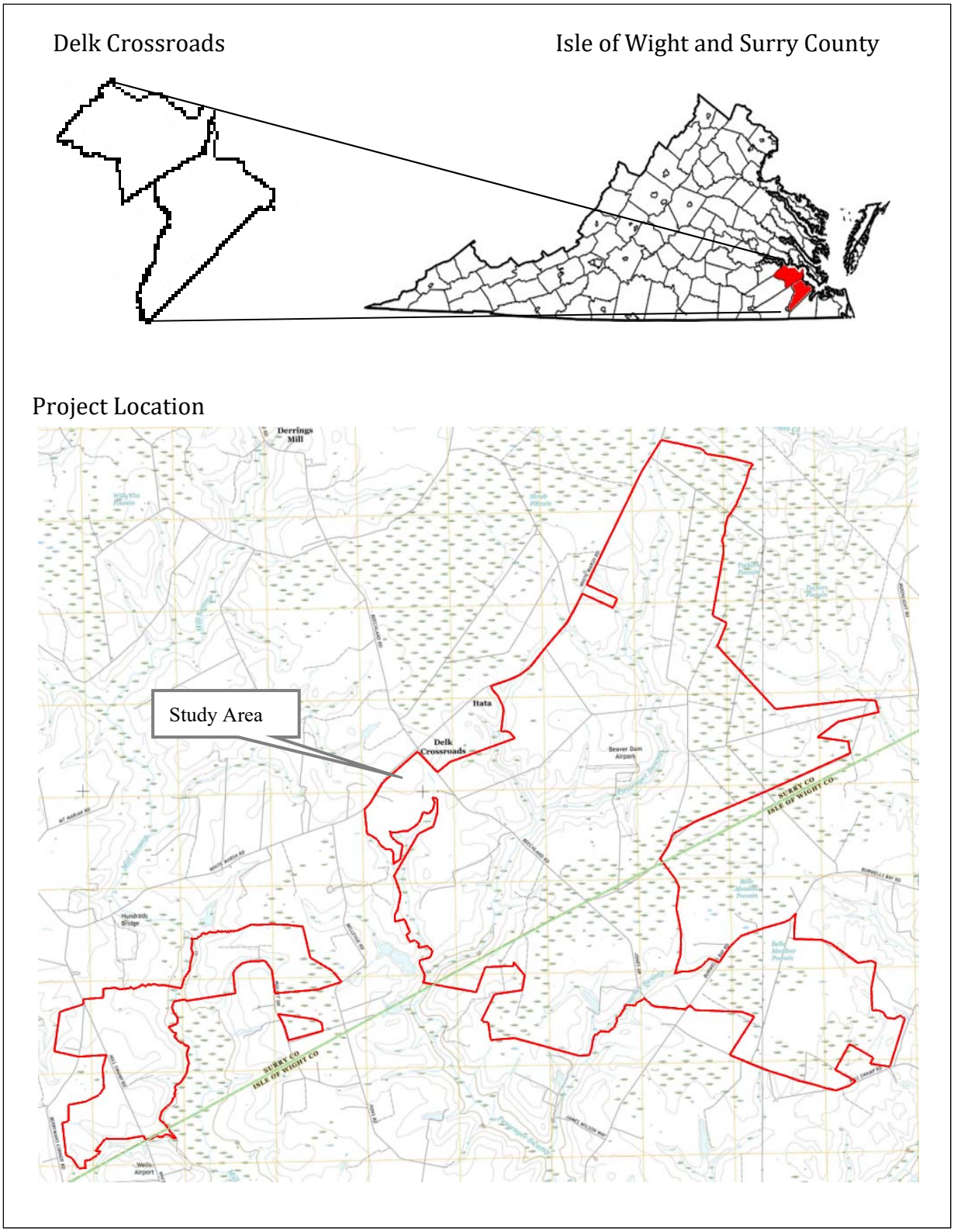

Figure 1-1: General location of the project area.

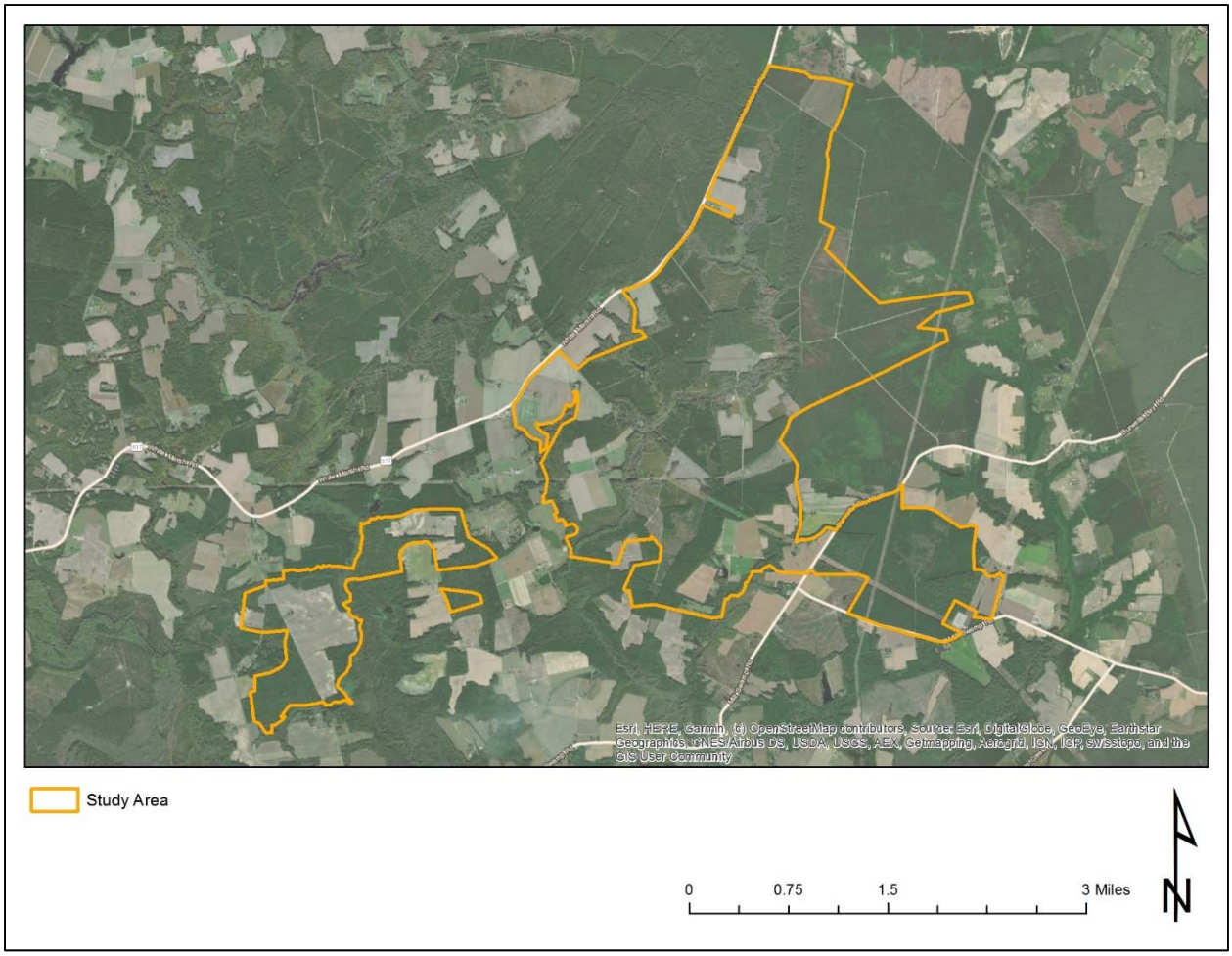

Figure 1-2: Aerial view of study area.

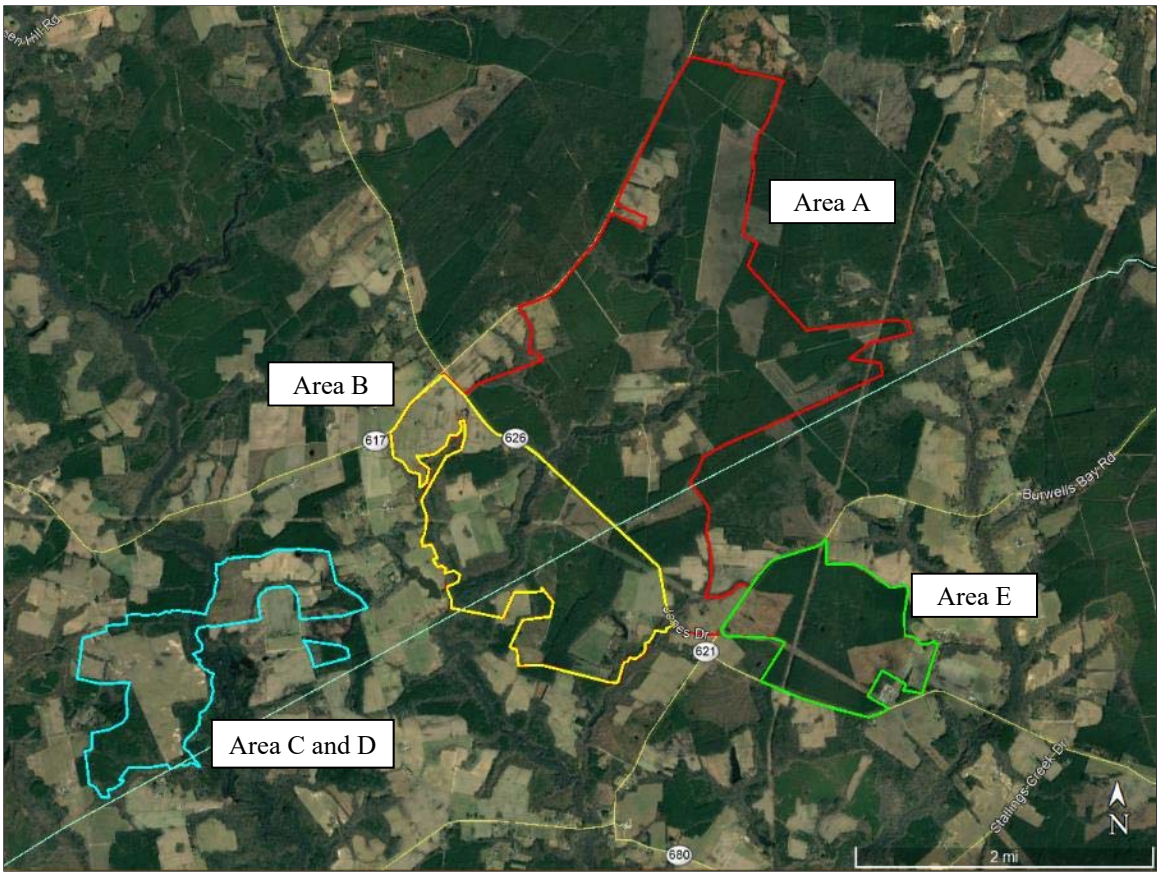

Figure 1-3: Cavalier Solar study area, showing sub-areas. Source: Google Earth 2018

2. SURVEY AREA

For the purposes of this project, the survey area was established to define the area in which the project may result in impacts to NRHP-eligible cultural resources. Impacts considered include "direct", in which project construction, components, or other aspects may physically alter a cultural resource. "Indirect" impacts are those which may introduce features, qualities, or other characteristics into the setting of a cultural resource. In the case of solar projects, direct impacts are typically introduced by the location of proposed arrays, access roads, fence lines, and utility easements. Indirect impacts are typically limited to the introduction of visual features.

As such, the architectural survey area includes the project area property, as well as the geographic area around the project within which the associated project components may be seen. The default viewshed survey area for solar projects according to SCC and VDHR guidance is a one-half mile buffer. For the purposes of this effort, the half-mile architectural survey was deemed appropriate. A map of the defined survey area for architectural resources is illustrated in Figure 2-1.

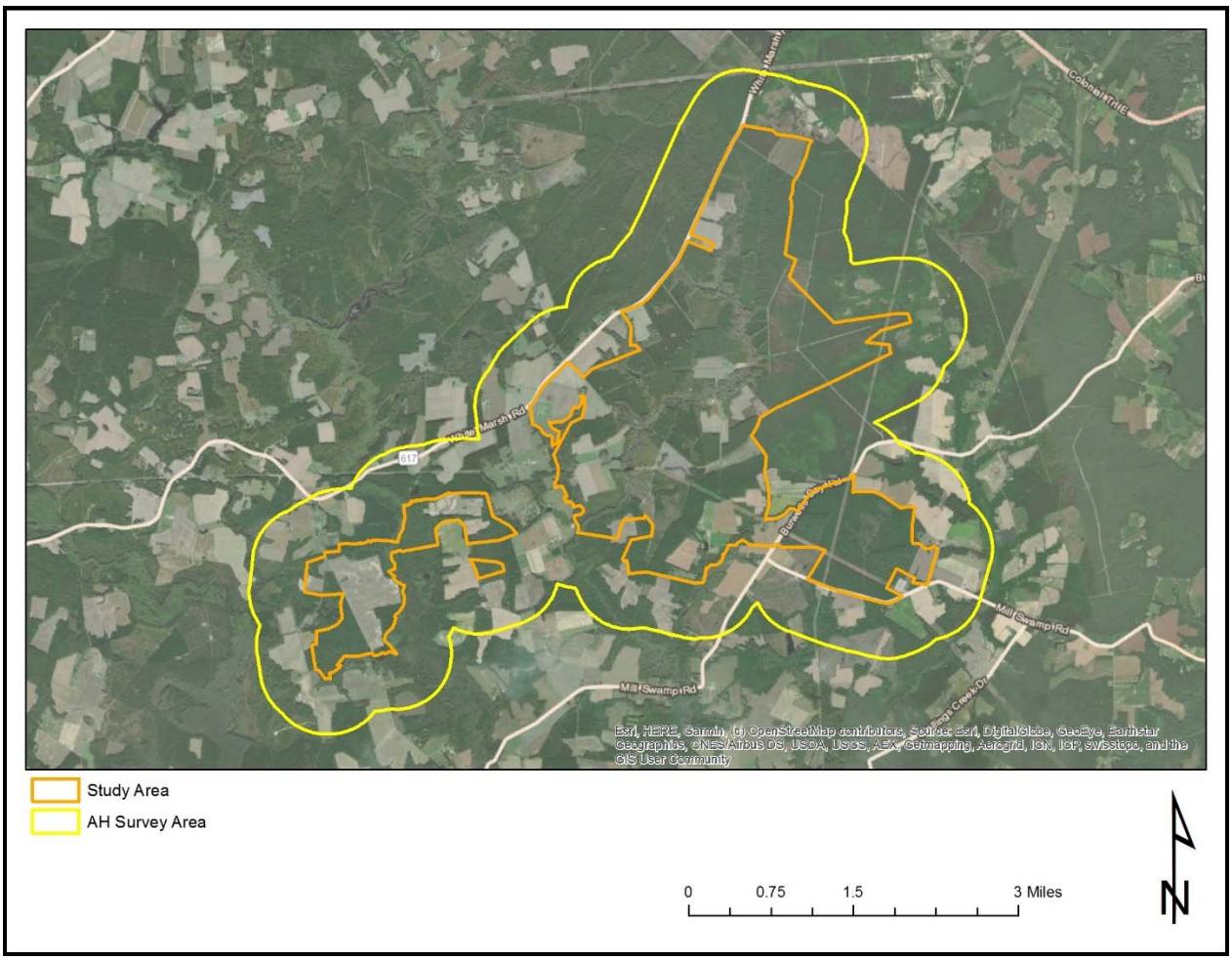

Figure 2-1: Cavalier Solar Study Area with architectural survey area.

3. RESEARCH DESIGN

The Phase I cultural resource survey of the Cavalier Solar project area was undertaken in order to confirm the existing condition of the property, note any surface evidence of cultural activity, recommend and implement an appropriate survey methodology for the property based upon the results of the background research and field reconnaissance, and identify the presence or absence of cultural resources on the property. The background research, field reconnaissance, and field survey methodologies are summarized below.

ARCHIVAL RESEARCH

In September 2020, D+A conducted background research with the goal of identifying all previously recorded historic properties located within and in the vicinity of the project area in accordance with VDHR's guidance document titled *Guidelines for Conducting Cultural Resources Survey in Virginia* (Revised 2017). Background research was conducted at the VDHR and on the internet and including the following sources:

- VDHR V-CRIS site files; and
- National Park Service, American Battlefield Protection Program, maps and related documentation.

As part of this Phase I study, D+A checked resource data at each of the above sources to verify accuracy and ensure the information was up to date at the time of the survey. In further preparation for the Phase I survey, D+A conducted additional review of the following documents and sources for information relative to unrecorded historic property locations in the project area:

- County Tax Assessors records;
- USDA Historic Aerial Imagery;
- U.S. Geological Survey Topographic Maps;
- Previous historic resource survey documents; and
- Local historical society archives.

The additional review conducted in support of the Phase I survey was designed to identify all properties greater than 50 years of age located within the project area. Historic properties include architectural resources, historic and cultural landscapes, battlefields, and historic districts.

CONTEXT DEVELOPMENT

Information from the literature review and background search was used in conjunction with additional research to develop a cultural and historical context to place the project area and any identified historic resources within their appropriate context for evaluations of historical significance. This context was developed through review of previous cultural resource studies, published and unpublished manuscripts, historic maps, aerial photographs, local histories, and a variety of internet sources.

For the purposes of this effort, a comprehensive cultural context of Isle of Wight and Surry Counties was prepared summarizing general historical trends, settlement patterns, and development with a focus on the vicinity of the project area. Further analysis and context development were undertaken for the defined survey area so that newly recorded resources could be effectively evaluated.

FIELD SURVEY

Architectural Resources

The background research conducted in support of this effort was designed to identify properties greater than 50 years of age located within the survey area. A reconnaissance field survey was undertaken to identify and document all buildings, objects, structures, sites, and districts within the survey area that were constructed in 1970 or earlier and meet (or will soon) the 50-year threshold for NRHP-consideration. Construction dates for resources were established through a combination of archival research, property records search, map analysis, and field inspection.

For each surveyed resource, field forms were completed with information from site observations including a physical description of the resource with information such as relationship to adjacent buildings and structures, general condition, surrounding setting, description of exterior materials, identifiable architectural or structural treatments, and retention of historic physical integrity. Site plans depicting the built environment around each property were sketched. Each identified resource was then marked on both USGS 7.5-Minute Quadrangle maps and current aerial photographs. Representative digital photographs were taken to document each property's existing conditions, setting, and secondary resources.

All field survey identification and documentation were conducted from public ROW, unless otherwise permitted, and included exterior features only. No interior inspections were conducted as part of this effort. In cases where a resource was not visible or accessible from the public ROW, the property was noted as such. All field documentation was organized and labeled with a unique identification number. Previously recorded resources subject to survey were numbered using their existing VDHR ID# while newly recorded resources were assigned a field recorder number.

All buildings and structures surveyed as part of this study were documented in accordance with VDHR's standards and guidelines and evaluated to determine potential significance in accordance with NRHP criteria. Concentrations of historic resources within or adjacent to the survey area were assessed in terms of their potential for inclusion in historic districts. Each resource's present condition, location relative to other resources, and distinguishing neighborhood characteristics were noted and photographed for an accurate assessment of NRHP Historic District eligibility.

From each resource deemed to be eligible or potentially eligible for listing in the NRHP, a viewshed assessment was conducted from the property towards the project area. This assessment included a visual inspection and photograph of the intervening landscape and vegetation to make a recommendation as to the likelihood that any improvements related to the project may introduce impacts to the resource.

ASSESSMENT OF IMPACTS

Following survey and evaluation, those resources deemed eligible for listing in the NRHP were assessed for potential impacts brought about by the project. The assessment of impacts was conducted by evaluating ground-based photography from NRHP-eligible and listed resources towards the project area. When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing on the NRHP and whether the project has the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not construction of the project will introduce any new or substantially different visual elements into a property's viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing on the NRHP.

REPORT AND RECORD PREPARATION

Information from field survey was used in conjunction with background research and context development to assess each identified cultural resource for potential NRHP-eligibility. A results section was prepared that summarizes the field findings, assessment of significance and NRHP-eligibility. The results of the study are accompanied by maps and photographs as appropriate and were synthesized and summarized in this report along with the research design, archives search, and cultural contexts. All research material and documentation generated by this project are on file at D+A's office in Midlothian, Virginia. VDHR site forms (Virginia Cultural Resources Information System (V-CRIS) were completed for all architectural resources, 50 years of age or older, identified during the survey.

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4. PREVIOUS INVESTIGATIONS

This section includes a summary of all the cultural resource management events that have taken place within the study area registered at VDHR through July 2019 and verified September 2020. It also lists all previously identified architectural resources and archaeological sites located within the study area, as well as within one mile of the study area.

AREAS A, B, AND E

PREVIOUS SURVEYS RELEVANT TO THE SITE

Research at the VDHR reveals that one Phase I archaeological survey has been conducted within one mile of the study area, which slightly overlaps with the study area (Figure 4-1): *An Archaeological Reconnaissance Survey of the 500KV, Septa to Yadkin Line in the County of Isle of Wight and the Cities of Suffolk and Chesapeake, Virginia* in 1981 by Howard A. MacCord, Sr. (Archaeological Society of Virginia)

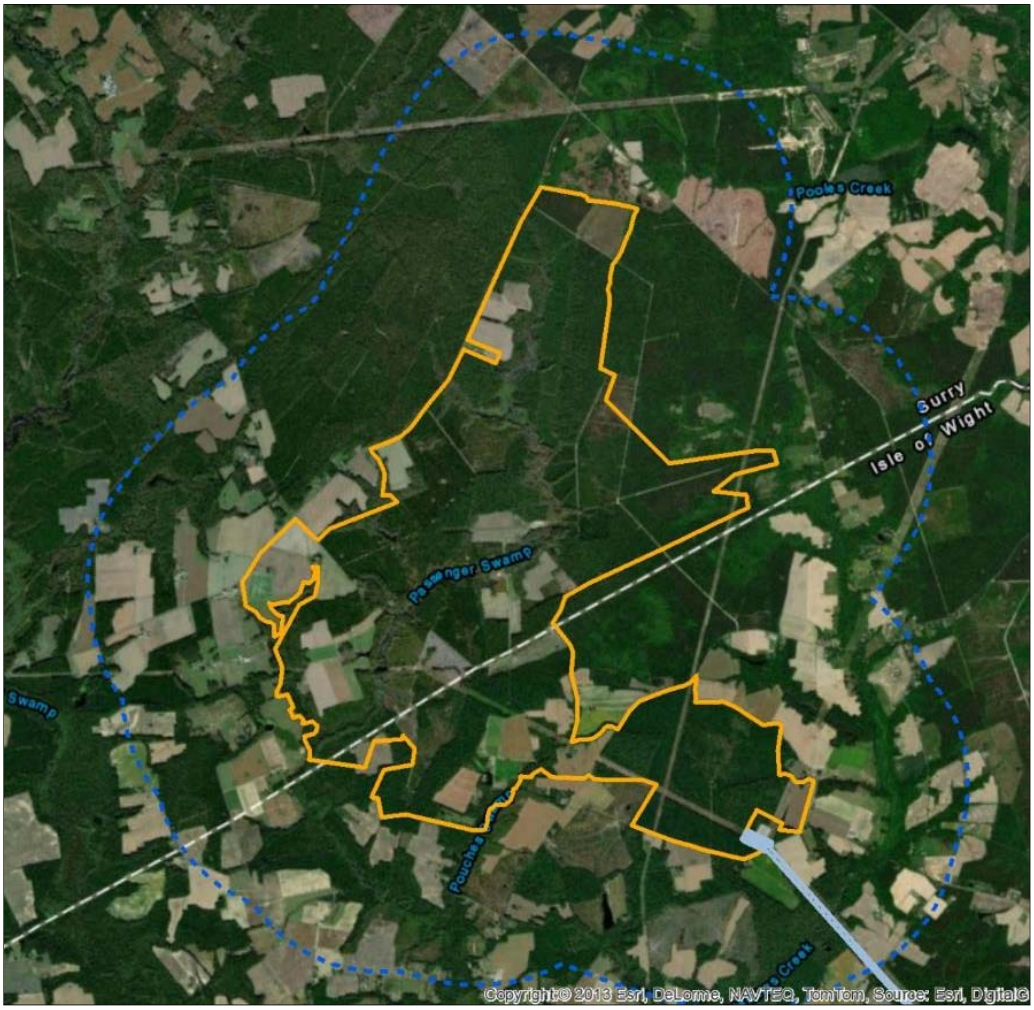

Figure 4-1: Previous surveys (gray hatched) conducted within 1.0 mile (dotted blue) of Areas A, B, and E of the study area (yellow). Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are no previously recorded archaeological sites located within one mile of the study area and none are located within the study area (Figure 4-2).

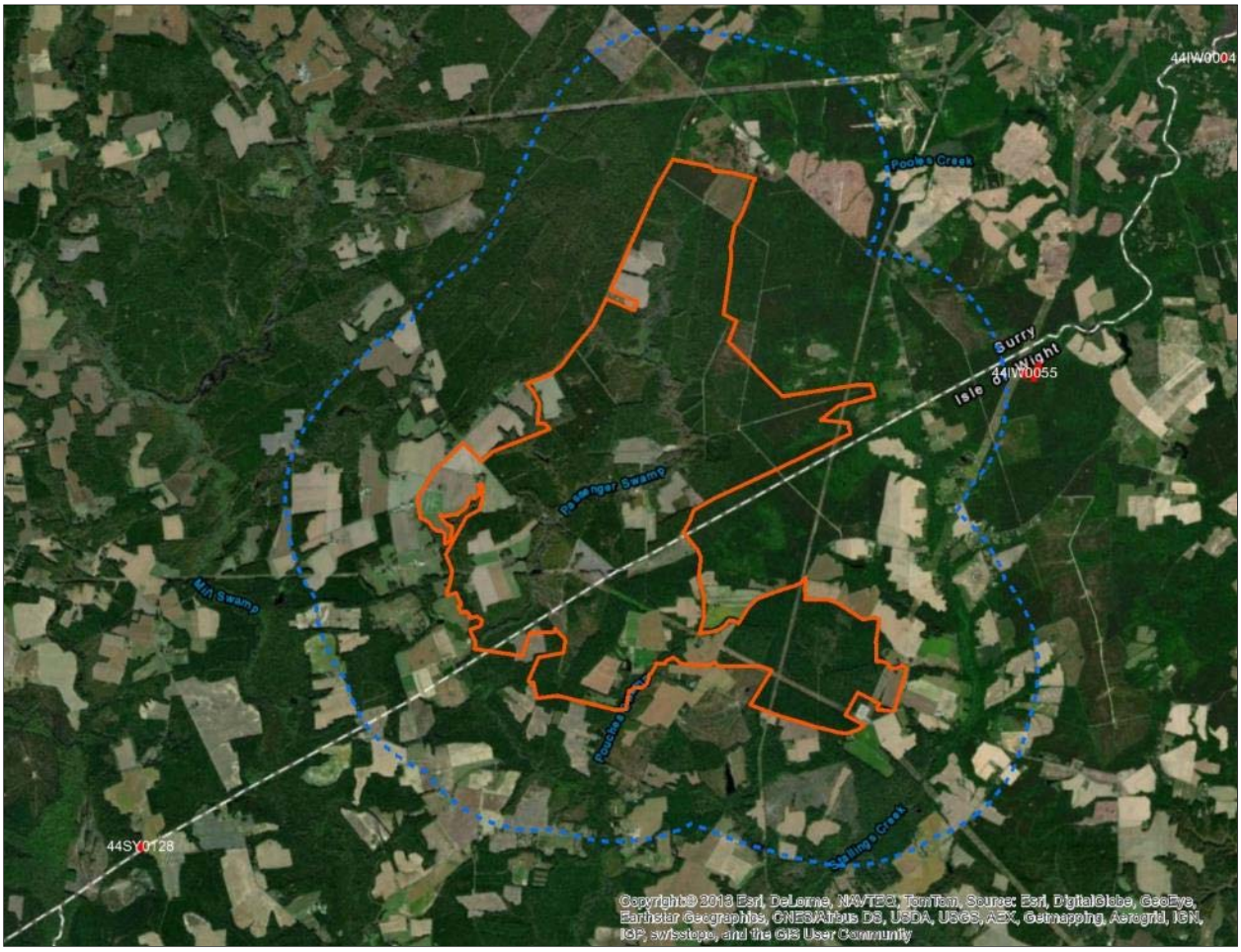

Figure 4-2: Map detailing all archaeological resources (red) within 1.0 mile (dotted blue) of Areas A, B, and E of the study area (orange). Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

Review of VDHR records identifies 12 previously recorded standing resources located within one mile of the study area, three of which are located within the study area (Figure 4-6, Table 4-3). These include a ca.1790 single dwelling (#090-0059) and a ca. 1800 single dwelling (#046-0066), a ca. 1830 farm kitchen (090-0058) none of which have been evaluated for eligibility for listing in the NRHP.

Among the remaining previously recorded resources are other single dwellings, a commercial building, bridge, and a kitchen. There is one resource that is listed in the NRHP: the Carroll Plantation/Fanlight House/Gray Carroll House (#046-0064). The remaining resources have either been determined not eligible or have not been formally evaluated for inclusion in the NRHP.

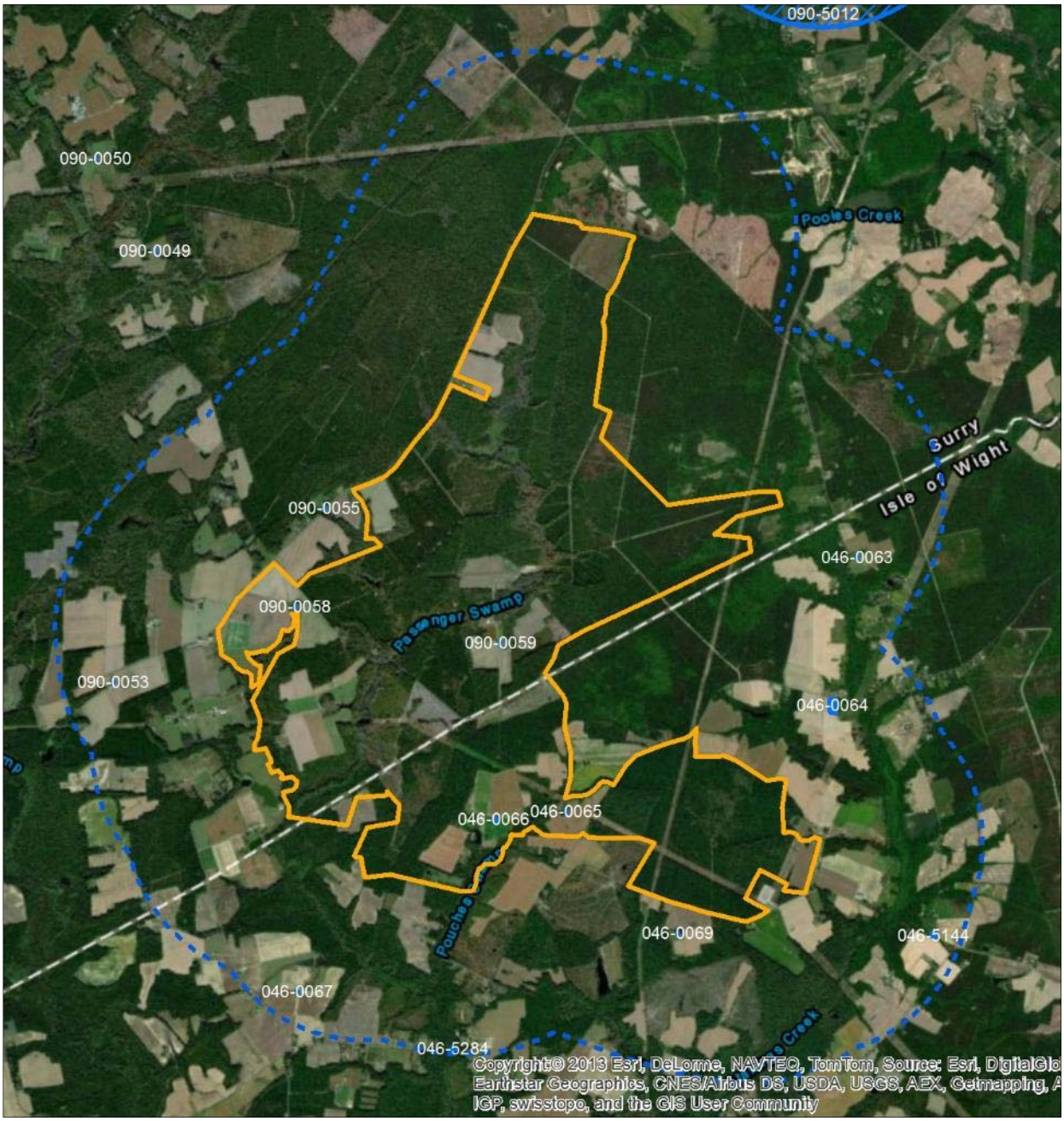

Figure 4-3: Map detailing all architectural resources (blue) within 1.0 mile (dotted blue) of Areas A, B, and E of the study area (orange). Source: V-CRIS

Table 4-1: Previously identified architectural resources located within 1.0 mile of the study area. Those resources highlighted orange have been determined eligible for the NRHP.

VDHR ID#	Resource Name	Type	Year	NRHP Status
046-063	House, Route 627	Single dwelling	Ca. 1800	Not Evaluated
046-0064	Carroll Plantation, Fanlight House, Carroll House	Single dwelling	Ca. 1820	DHR Staff: Eligible
046-0065	Jones House	Single dwelling	Ca. 1800	Not Evaluated
046-0066	Gale Farm	Single dwelling	Ca. 1800	Not Evaluated
046-0067	Pons House, Rt 625	Single dwelling	Ca. 1800	Not Evaluated
046-0069	Delk Farm	Single dwelling	Ca. 1810	Not Evaluated
046-5144	Store, 11489 Mill Swamp Road; Store, Intersection of Mill Swamp Road and Moonlight Road	Commercial building	1930	Not Evaluated
046-5284	Bridge #6031, Mill Swamp Road; Isle of Wight County Bridge #6031	Bridge	1945	DHR Staff: Not Eligible
090-0053	Allmond House	Single dwelling	Ca. 1810	Not Evaluated
090-0055	Delk Crossroads Farm	Single dwelling	Post 1910	Not Evaluated
090-0058	Bell Farm	Kitchen	Ca. 1830	Not Evaluated
090-0059	Dais/Ida House	Single dwelling	Ca. 1790	Not Evaluated

AREA C AND D

PREVIOUS SURVEYS RELEVANT TO THE SITE

Research at the VDHR reveals that there are no Phase I archaeological surveys that have been conducted within one mile of the study area and none have taken place within the study area (Figure 4-4).

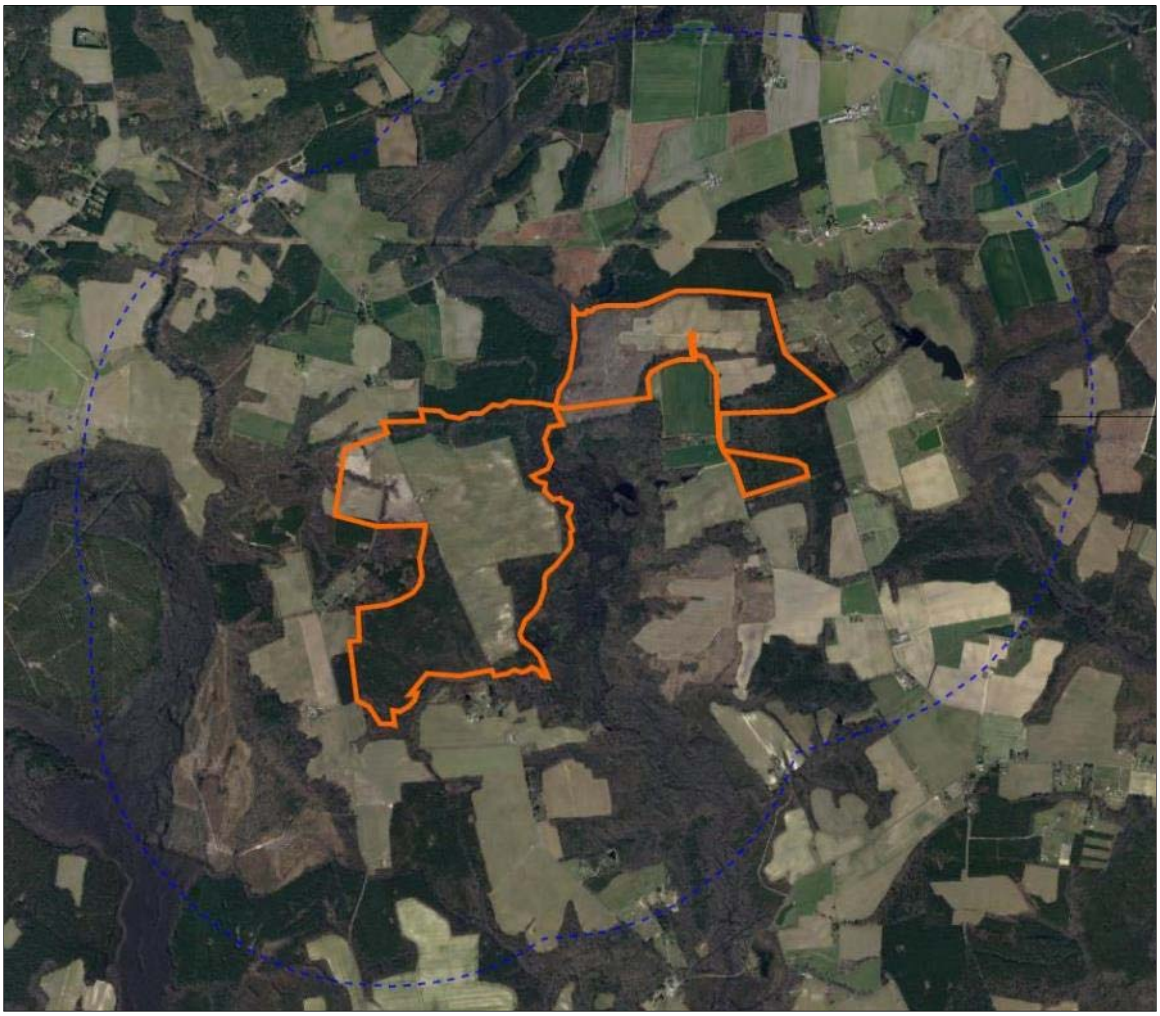

Figure 4-4: Previous surveys (green hatched) conducted within 1.0 mile (dotted blue) of C and D of the study area (orange). Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There is one previously recorded archaeological site located within one mile of the study area and none are located within the study area (Figure 4-2, Table 4-5). This site is a single dwelling with an indeterminate historic date range, and it has not been formally evaluated.

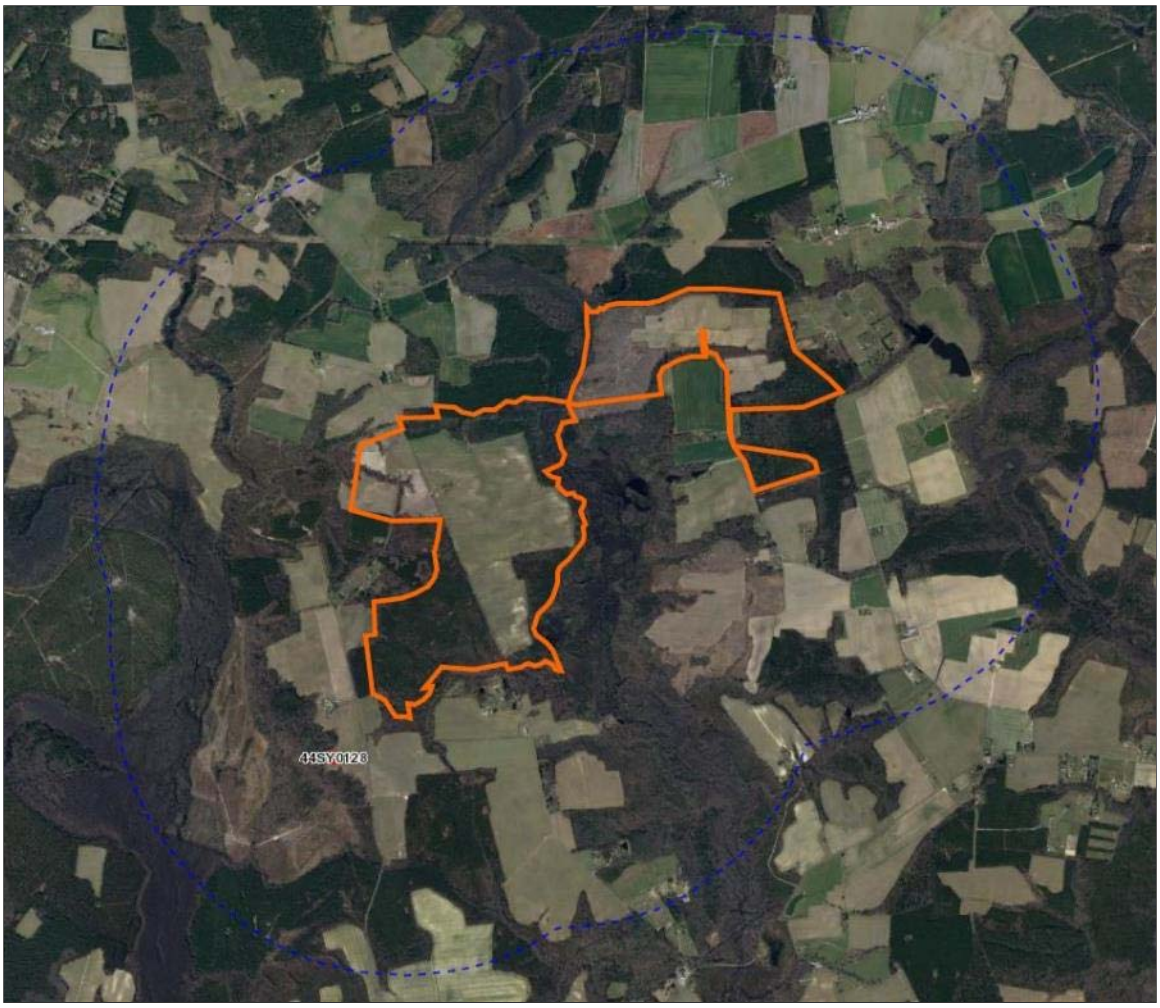

Figure 4-5: Map detailing all archaeological resources (red) within 1.0 mile (dotted blue) of Area C and D of the study area (orange). Source: V-CRIS

Table 4-2: Previously identified archaeological sites located within 1.0 mile of the study area.

VDHR ID#	Site Types	Cultural Designation	Temporal Association	NRHP Status
44SY0128	Single dwelling	Indeterminate	Historic/Unknown	Not Evaluated

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

Review of VDHR records identifies two previously recorded standing resources located within one mile of the study area, none of which are located within the study area (Figure 4-3, Table 4-6). The previously recorded resources are single dwellings that have not been formally evaluated for inclusion in the NRHP.

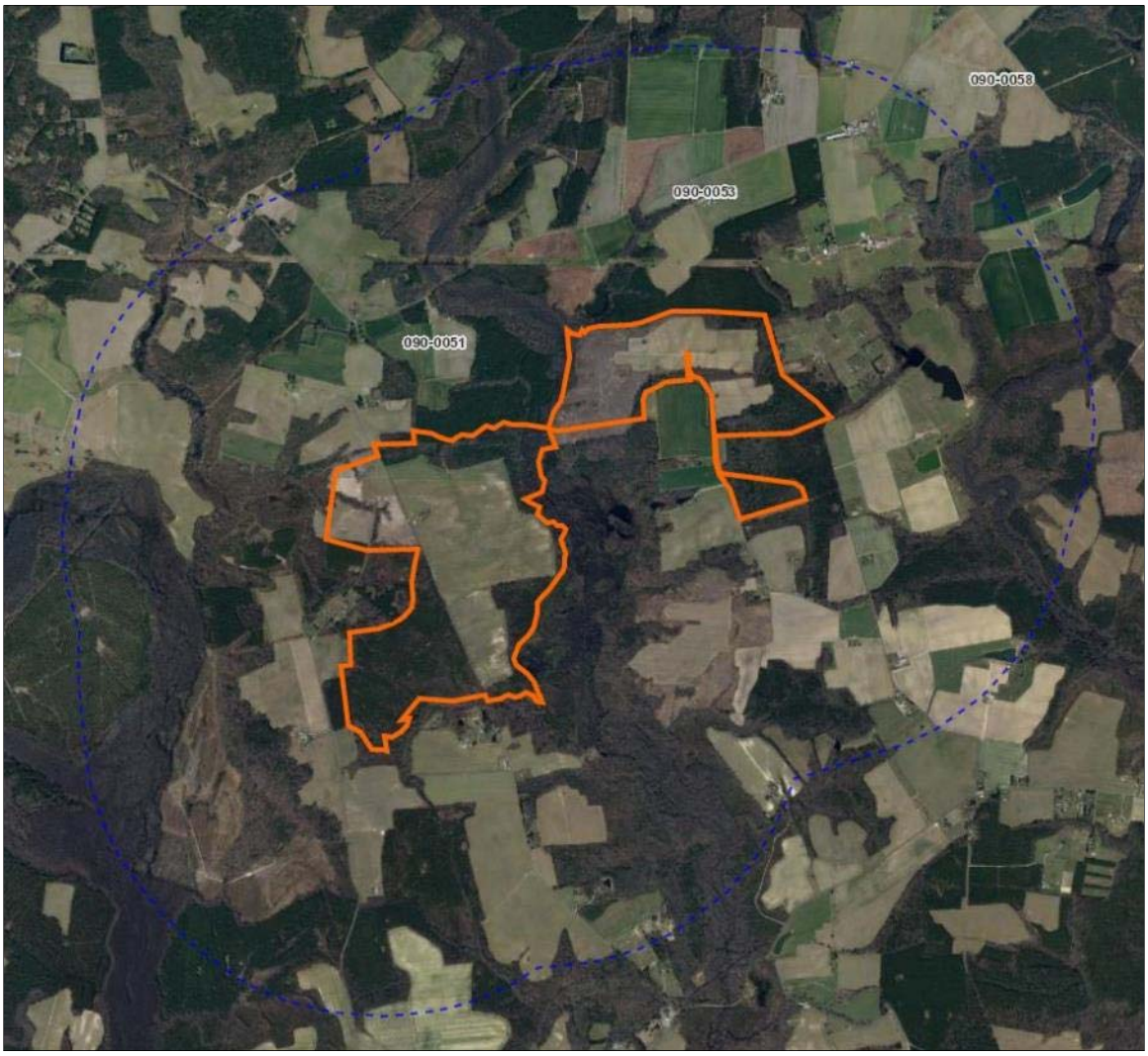

Figure 4-6: Map detailing all architectural resources (blue hatched) within 1.0 mile (dotted blue) of Area C and D of the study area (orange). Source: V-CRIS

Table 4-3: Previously identified architectural resources located within 1.0 mile of the study area.

VDHR ID#	Resource Name	Type	Year	NRHP Status
090-0051	Stratman House	Single dwelling	Ca. 1750	Not Evaluated
090-0053	Allmond House	Single dwelling	Ca. 1810	Not Evaluated

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5. HISTORIC CONTEXT

The following section provides a brief summary of the general overarching regional prehistoric and historic themes relevant to Virginia and Isle of Wight and Surry counties. Because of the immense size of the study area, it has been divided into five specific areas that may be referenced throughout the following context (Figure 5-1).

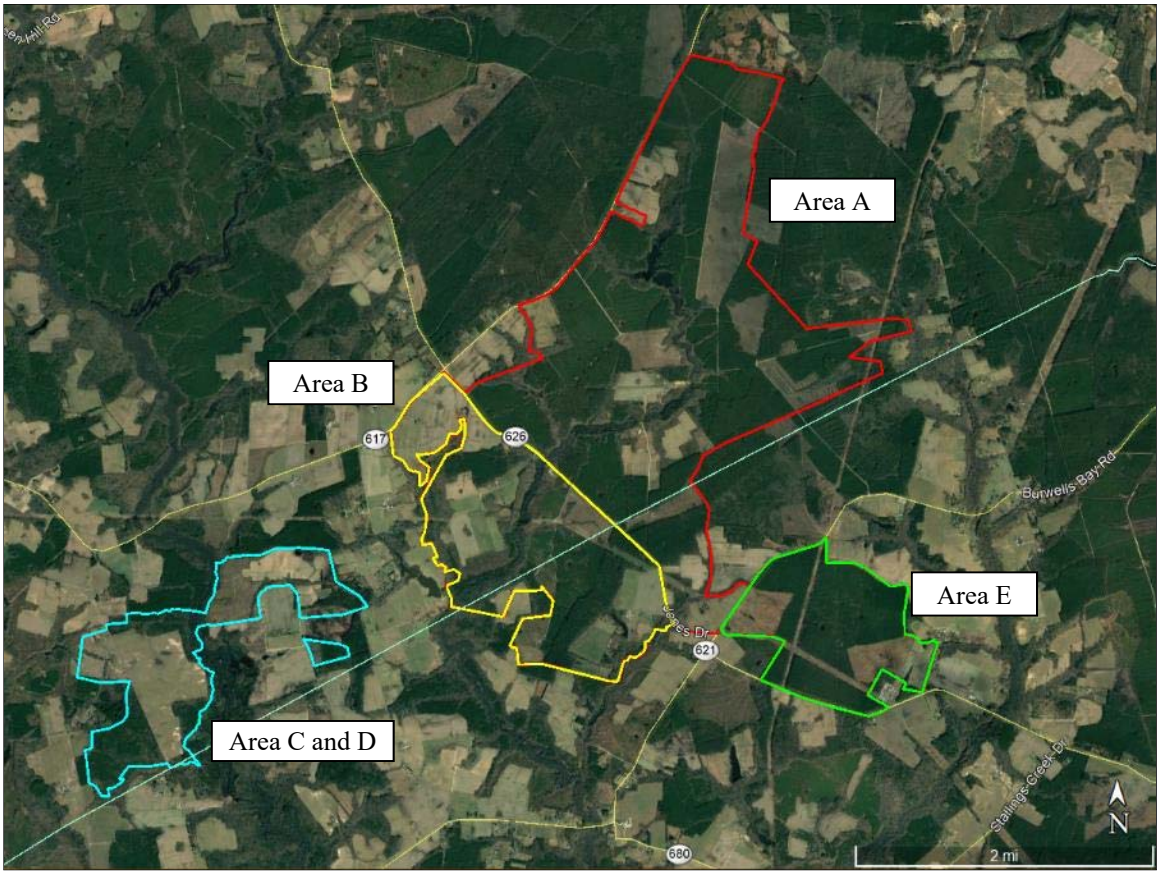

Figure 5-1: Cavalier Solar study area. Source: Google Earth

The primary emphasis of this context focuses on the anthropological and material culture trends in prehistory and history and describes how people throughout time could have left their archaeological mark on the landscape of the study area specifically. Prehistoric and historic occupation statistics and trends were analyzed, as were historic maps and available first-hand accounts which aided in establishing the appropriate cultural context for the study area as defined by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and the Virginia Department of Historic Resources' *How to use Historic Contexts in Virginia: A Guide for Survey, Registration, Protection, and Treatment Projects* (VDHR 2017).

PALEOINDIAN PERIOD (PRIOR TO 8000 B.C.

Recent archaeological findings in Virginia have found the first Paleoindians are projected to have arrived in the southeast of North America between 15,000 and 11,000 years ago (McAvoy and

McAvoy 1997). Two of the earliest archaeological sites associated with Paleoindian occupation in Virginia is the Cactus Hill site (VDHR #44SX0202) located along the Nottoway River in Sussex County and the Thunderbird Site (VDHR #44WR0011) in Warren County. These early populations coincided with the late glacial era when sea levels were approximately 230 feet below their present-day level (Anderson et al. 1996:3). The Laurentide Ice Sheet covered much of northern North America, lowering temperatures in the region and creating an ideal environment for a boreal forest (Delcourt and Delcourt 1981). Paleoindians apparently survived in this environment through opportunistic hunting and gathering of smaller mammals, fish, and wild plants (Fiedel 2001). Seasonably mobile, these Paleoindians utilized different food sources at different times of the year, an extensive subsistence pattern that required a large territory.

Accordingly, the Paleoindians may have maintained a central base camp located either in a diverse ecozone where flora and fauna were easily procured or near lithic sources that contained cryptocrystalline stone. Wider ranging satellite camps would have then have been seasonally occupied to exploit other natural resources, be they lithic material, flora, or fauna (Anderson et al 1996; Daniel 1996; Binford 1980). Most Paleoindian sites are small and scattered, suggesting that the groups lived in small familial bands distributed across the landscape. The lack of status items among their archaeological remains suggests that these groups recognized little differentiation in status, and probably employed an egalitarian social structure. Ethnographic analogies suggest that Paleoindians might have maintained this rough equality by shunning aspiring leaders, and methods of property redistribution.

The Paleoindians relied upon durable and easily-shaped cryptocrystalline materials such as chert and jasper for their tools. They fashioned these rocks into a variety of instruments, among which were scrapers, gravers, and adzes. Paleoindian projectile points tended to be fluted and bifacially sharpened. Due to time and rising sea levels, many Paleoindian material culture finds are limited to isolated projectile points. Researchers differentiate the Paleoindian Period into three smaller periods reflecting changes in the morphology of projectile points. These periods include the Early Paleoindian (9500-9000 B.C.), the Middle Paleoindian (9000-8500 B.C.), and the Late Paleoindian (8500-8000 B.C.).

During the Early Paleoindian, Paleoindians produced large fluted Clovis points, a style widespread throughout North America, which could be affixed to a spear shaft. Sites from this period are found throughout the eastern seaboard in very low densities. Regions depicting greater concentrations of these sites are in Tennessee, the Cumberland and Ohio River Valley, western South Carolina, the northern Piedmont of North Carolina, and southern Virginia (Anderson 1990:164-71; Daniel 1996; Ward and Davis 1999).

The Middle Paleoindian saw a modification of Clovis points, such as the disappearance of the fluting in some cases and the addition of "ears" at the base of the point. The appearance of these new types, such as the Cumberland, Simpson, Clovis variants, and Suwanee points, might reflect changes in subsistence patterns as the result of rising global temperatures. During this time, it is theorized that American Indians began to radiate out from their previous range of occupation to exploit resources from more distant environments (Anderson 1990; Anderson et al. 1996; Ward and Davis 1999:31).

Changes to the projectile points intensified during the final centuries of the Paleoindian Period resulting in an increased number of changes in projectile point morphology. The Dalton and Hardaway types and other variants allowed late Paleoindian peoples to hunt new species.

The Paleoindian's scattered settlement pattern and simple culture contribute to the limited number of associated sites in the region, fewer than 75 sites have been identified in present-day Virginia and only 25 have been positively identified in the entire Chesapeake (Turner 1989; Dent 1995). Those Paleoindian sites that have been located tend to be quarry sites, which groups frequently visited and areas where several bands gathered (Meltzer 1988; McAvoy 1992). Many sites were likely destroyed when warming global temperatures melted the glaciers and inundated the low-lying Paleoindian settlements.

ARCHAIC PERIOD (8000 TO 1200 B.C.)

Dramatic climatic changes beginning about 10,000 years ago prompted a reconfiguration of prehistoric people's subsistence strategies and social organization. Specifically, global temperatures began rising with the dawn of the Holocene geological period, simultaneously shrinking the glaciers and raising sea levels. In North America, the Laurentide Ice Sheet gradually receded northward, making the southeastern portion of the modern-day United States warmer and drier. The boreal forest of the Pleistocene era slowly gave way to a mixed conifer and northern hardwood forest. The area began to assume its modern-day climate and floral and faunal species. This warming also resulted in dramatic hydrological changes for coastal Virginia. As the sea level gradually climbed, the land was flooded; as a result, the lower reaches of the Susquehanna River flooded to form the Chesapeake Bay.

These climatic changes created new food sources for prehistoric people. The warmer, drier climate led to a greater biodiversity, especially floral, as spruce and fir forests gave way to nut- and fruit-bearing trees (Aaron 2009:17). This allowed humans to rely more heavily on gathering wild plants, nuts, and berries. Indeed, archaeologists have discovered tools, such as nutting stones and pestles, for processing vegetable materials. The creation of the Chesapeake Bay, furthermore allowed Archaic people to exploit seafood, such as anadromous fish and shellfish. The appearance of shell middens during the period testifies to the importance of mollusks to the Archaic diet (Dent 1995).

To exploit these new resources, Archaic people likely intensified their seasonal movement, splitting their time between a semi-permanent base camp and smaller, dispersed hunting and gathering camps. Bands of as many as 30 people may have gathered in the base camp for part of the year, and then dispersed into "microbands," composed of a single family or two, in other seasons (Griffin 1952; Anderson and Hanson 1998; Ward and Davis 1999). The range of band movement would have occurred over relatively large regions. These larger base camps are theorized to have been located along rich environmental areas near the Fall Line or along main rivers.

New subsistence patterns also required new technologies and the adaption of existing technologies to be suitable to existing game. "The spear thrower [called an atlatl] added range and power to the hunter's arm. The axe enabled people to fell trees. The mortar and pestle made it easy to pound and grind nuts, seeds, and roots" (quoted in Aaron 2009:18). With new technologies, smaller game

could be more easily hunted and plants could be processed more effectively. The resulting products of these technologies differentiate the Archaic Period into three smaller periods. The period also saw innovations in projectile point manufacturing. In a further divergence with the Paleoindians who relied heavily on cryptocrystalline lithics, Archaic people utilized more materials, such as quartzite and quartz.

The Early Archaic (8000-6500 B.C.) is characterized by projectile points with corner and side-notches, rather than hafting the points to a wood shaft by fluting as the Paleoindians did. The resulting points, such as the Kirk Stemmed and Notched, Palmer Corner-Notched, Fort Nottoway, Kessell, Charleston, and Amos, are thus readily distinguishable from Paleoindian points (Custer 1990). Early Archaic people hunted caribous, elk, moose, deer, and bear (Egloff and Woodward 1992:12). Additionally, there appears to be an increase in population at this time.

The Middle Archaic (6500-3000 B.C.) is defined primarily by the appearance of stemmed projectile points which were fitted into a hold in the spear shaft. Therefore, points such as the LeCroy, Stanly, Morrow Mountain, and Guilford are diagnostic of Middle Archaic assemblages. Some evidence also points to the use of grinding technology to make atlatls, or spear throwers, in this period. Mortar and pestles also began to appear during the Middle Archaic, as did axes. The ability to more easily clear forests, resulted in a change in hunting as deer, bear, turkey, and other animals came to the cleared land to eat the new, low-lying growth (Egloff and Woodward 1992:14-15).

Researchers have also pointed out that contexts from this period contain a larger amount of "expedient" stone tools, owing in part to the rapid environmental changes of the Climatic Optimum, which dates from 6000 to 2000 B.C. (Wendland and Bryson 1974; Claggett and Cable 1982; Ward and Davis 1999). These tools were makeshift and less formal, allowing their owners to use them for a wider variety of activities than tools designed for specific uses. The greater density and disbursement of archaeological sites from this period indicates a consistent rise in American Indian populations.

By the Late Archaic (3000-1200 B.C.), a more congenial climate and more abundant food sources led to dramatic population increases, there are estimates of tens of thousands of Virginia Indians during this time (Egloff and Woodward 1992:20). To be certain, this apparent increase might be exaggerated because Late Archaic people had a richer material culture than previous peoples and hence left more archaeological evidence of their existence (Klein and Klatka 1991). Nonetheless, the greater number of Late Archaic sites relative to earlier periods suggests that the human population did in fact expand over the course of the Archaic Period. According to Barber et al. (1992), Late Archaic sites were more than twice as numerous as Middle Archaic sites. As humans occupied the land more densely, they also became more sedentary and less mobile, perhaps owing to the greater reliance on plant-based food resources compared to hunting and fishing. Late Archaic people settled along fertile flood plains (Egloff and Woodward 1992:20).

American Indians from this region may also have begun to domesticate plants such as goosefoot, squash, and gourds (Yarnell 1976:268; Chapman and Shea 1981:70). They also used squash and gourds for food storage, in addition to earthen pits (Egloff and Woodward 1992:22). The projectile point technology of the Late Archaic Period is dominated by stemmed and notched point forms,

many with broad blades, likely used as projectiles or knives. These points diminish in size towards the latter portion of this period (Dent 1995; Justice 1995).

It should also be noted that prehistoric sites that consist of lithic debitage, no diagnostic artifacts, and an absence of ceramic artifacts likely date to the Archaic Period. These sites are described in the records as "Prehistoric/Unknown," however they are most likely to date to this period despite not having a specific temporal designation.

WOODLAND PERIOD (1200 B.C. TO 1600 A.D.)

The American Indians of the Woodland Period began to maintain a greater reliance on horticulture and agriculture based on the cultivation of maize, imported from Mesoamerica via the Mississippi Valley, as well as squash, beans, and other crops. This increased sedentism and the nucleating of societies (Klein and Klatka 1991; Mouer 1991). Populations during this time began to consolidate into villages near rivers and floodplains with fertile soil, favorable terrain, and access to fauna. Satellite procurement camps are far less frequent than in the Archaic Period.

The Woodland Period is defined foremost by the development of a ceramic technology for storing and cooking food. Although Archaic people had carved out vessels from soft soapstone, prehistoric Americans did not begin shaping ceramic vessels until around 1200 B.C. The earliest pottery produced on the coastal plain, the Marcey Creek Plain, and other types, in fact resembled those soapstone vessels, suggesting that they were used for similar purposes. Woodland peoples, however, modified the square- or oval-shape soapstone inspired vessels. They began decorating the pieces with cord and tempering them with soapstone and other types of grit to make them stronger. Examples include Selden Island ceramics (tempered with soapstone) and Accokeek pieces (which used sand and grit for tempering). Anthropologists divide the period up into smaller periods based on changing projectile points and ceramics, as well as settlement patterns.

The beginning of the Early Woodland (1200-500 B.C.) settlements in the Piedmont and Coastal regions of Virginia are located along rivers as American Indians developed a more sedentary lifestyle during this time (Klein and Klatka 1991; Mouer 1991). They began to rely more and more on horticulture and in the Coastal Region preferred floodplains and low-lying neckland with rich sandy soil (VDHR n.d.).

During the Middle Woodland (A.D. 300-1000), there is an increase in sites along major trunk streams and estuaries as people move away from smaller tributary areas and begin to organize into larger groups (Hantman and Klein 1992). The Middle Woodland diet becomes more complex as people begin to exploit nuts, amaranth, and chenopod seeds in addition to fish, deer, waterfowl, and turkey. Corn by this time had transformed into the large ears familiar today. The bow and arrow replaced spears for hunting (Egloff and Woodward 1992:25). Those in the Coastal Region continued to rely on resources from its saltwater and freshwater rivers, bays, marshes particularly fish and oysters (VDHR n.d.). With more specialized crafts and increased trade came status. Evidence of rank societies emerges more clearly with the spreading of religious and ritual behavior including symbols and regional styles apparent in ceramic styles and other sociotechnic and ideotechnic artifacts.

Variance in ceramic manufacture is a hallmark of the Middle Woodland Period. Pope's Creek ceramics are associated with the beginning of this period, and Mockely ceramics with the later. Pope's Creek ceramics are tempered with medium to coarse sand, with occasional quartz inclusions, and interior scoring has also been recorded (Stephenson 1963:94; McLearen and Mouer 1989). The majority of Pope's Creek ceramics have net-impressed surfaces (Egloff and Potter 1982:99; McLearen and Mouer 1989:5). Shell-tempered Mockley ceramics first appeared around 200 A.D. in Virginia to southern Delaware. There was a variation in surface treatments for Mockley that included plain, cord-marked, and net-impressed (Egloff and Potter 1982:103; Potter 1993:62).

By the Late Woodland Period (900-1600 A.D.), the use of domesticated plants had assumed a role of major importance in the prehistoric subsistence system. The adoption of agriculture represented a major change in the prehistoric subsistence economy and settlement patterns. Expanses of arable land became a dominant settlement factor, and sites were located on fertile floodplain soils or, in many cases, on higher terraces or ridges adjacent to them. American Indians began to organize into villages and small hamlets that were sometimes highly nucleated and occasionally fortified with palisades. "Coastal Plain people built their villages creating many long, oval houses either spaced close together and surrounded by a palisade, or dispersed, separated by fields for gardening" (VDHR n.d.).

Around 1150 A.D. Cashie Ware began to appear. Cashie Ware was made "with wicker-fabric of medium to narrow width, simple stamped, and plain surface treatments" and had slightly angular to rounded quartz pebbles for temper (Egloff and Potter 1982:109). While Cashie Ware was widespread throughout the interior Coastal Plain of North Carolina, it occurred in Greensville, Southampton, and Sussex counties of Virginia as Branchville Ware (Egloff and Potter 1982:109). This indicates that type was shared by the Iroquois Tribe.

Most of the coastal Virginia Indians, with the exception of the Meherrins and the Nottoways, were Algonquian-speaking people (Egloff and Woodward 2000:43). The majority of this population of approximately 14,000 to 21,000 were brought under the rule of Wahunsunacock, who formed the Powhatan chiefdom by the early seventeenth century (Egloff and Woodward 2000:43).

SETTLEMENT TO SOCIETY (1607 – 1750)

Upon the arrival of Europeans to Virginia, American Indian towns and villages lined the James River (Figure 5-2). The vicinity of present-day Isle of Wight County was occupied by the Worrosquoyackes living in the two major villages of Mathomank, near present-day Burwell's Bay, and Mokete, at Pagan Point. Though the tribes' primary villages were along the James River, they used interior lands up to at least 20 miles inland (King 1993:1). The Quiyoughcohannock occupied Surry County in four towns dotting the roughly 100 square miles between the Upper and Lower Chippokes creeks (Geraghty 2019).

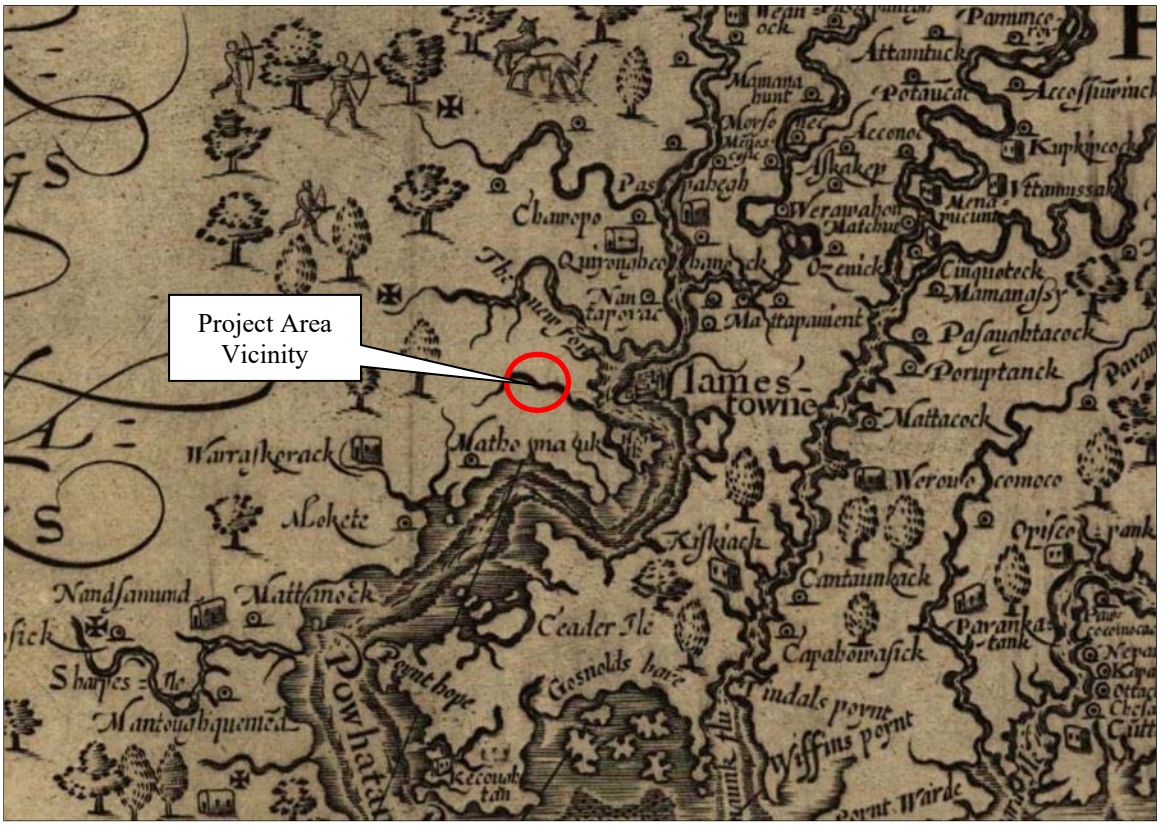

Figure 5-2: Detail of *Virginia, Discovered and Described* [sic], by John Smith, depicting the general vicinity of the study area. Source: Library of Congress

On April 26, 1607, three ships commanded by Capt. Christopher Newport and sponsored by the proprietary London Company section of the Virginia Company made their first landfall in North America at Cape Henry, in the northeastern part of present-day Virginia Beach (City of). The crew landed just temporarily, and soon left the cape to seek a site further inland which would be more sheltered from ships of competing European countries. They sailed roughly 50 miles up the James River to where they established a fort at Jamestown in May 1607. Life at Jamestown was initially harsh, with the settlers suffering from starvation, disease, and attack by the native peoples.

In the spring of 1608, Capt. John Smith was driven by the necessity of finding food for the famished settlers. He crossed the James River into what is now Isle of Wight County and obtained bushels of corn from the Warraskoyak. While these American Indians initially acted kindly to the suffering settlers, in a few years they nearly killed every colonist on the south side of the James River (Morrison and Gwaltney 2006). The new settlers made some attempts to make use of the land to aid in their survival and in 1608 they began keeping hogs on Hog Island, eight miles north of the study area; a garrison was also placed on the island to warn Jamestown of approaching European enemies.

The Virginia Company's search for an income producing product in the colony came to fruition with John Rolfe's successful experimentation with tobacco in the early 1610s. The crop became the dominant crop of the colony and determined the pattern of nearly every aspect of life, encompassing the economy, the cultural landscape, and social relations (Kulikoff 1986; Moore

1976). Increased growth of the labor intensive crop also led to more land hungry planters and increased use of indentured servants followed by enslaved individuals.

English settlement slowly spread along the James River. By 1619, Captain Christopher Lawne and Sir Richard Worsely initiated settlement on the south side of the James at Lawne's Creek, now roughly the dividing line of Isle of Wight and Surry Counties. Originally known as Lawne's Plantation, the London Company changed the name of the area to Isle of Wight Plantation in 1625. By 1620, there had been six land patents in what would become Surry County (Atkins 2008). While the south side of the James River was rich, the lands were fringed by swamps and the harbors were fewer and shallower making the area a bit less desirable (Rouse 1968:17). The continued spreading of European settlement, however, increasingly stressed relations between them and American Indians.

Chief Powhatan died in 1619 and control over the chiefdom was passed to his brother Opechancanough who planned to eradicate the English from Virginia (Tyler 1990:13). The murder of the Indian Nemattanew in early March 1622 provided pretext for a mass attack. On the morning of March 22, members of the Powhatan Confederacy and the Chickahominy Tribe killed English colonists along a 70-mile stretch on both sides of the James River. The result was a loss of more than a quarter of the total European population. Some English were saved through the actions of the Virginia Indian Chanco who warned Richard Pace, a resident of Surry County (King 1993:4). For the next decade, Virginia was in a state of open warfare between the two entities.

English settlement continued to spread and some individuals were able to gain vast tracts of land, first along the major navigable waterways and then on the interior lands. In Virginia, the head right system was followed in the distribution of land. During the first hundred years of settlement, a grant of fifty acres was given for the importation of every emigrant (Morrison and Gwaltney 2006). In this way, the size of land granted varied greatly. Using this system, many patents were distributed. The river front on the James was largely settled in the 1630s; in Surry County alone 147 original land patents have been identified in this decade (Atkins 2008).

By 1634, the population of the Virginia Colony had grown to the point that King Charles I directed the formation of eight shires (counties). James City County spanned both sides of the James River and encompassed Surry County. To the east of it was Warroaquyoake, later renamed Isle of Wight and the wharf village of Smithfield was chosen as the county seat (Rouse 1969:67). Despite the patented land on the south side, Surry County historian James Kornwulf observed that "Today the region is one of the most heavily forested and least densely settled regions of the county…although there is ample evidence it was heavily planted in the seventeenth century" (quoted in Laird et al. 2017:16).

The growth in population saved the colony when Opechancanough planned a second uprising in 1644. Although more than 500 settlers lost their lives, by this time the colony was well established and the loss did not seriously threaten its survival (Whittenburg and Coski 1989:21). The resulting treaty, Treaty of 1646, saw the loss of Virginia Indian's land between the York and Blackwater rivers (Egloff and Woodward 2000:45).

Approximately eight miles south of the James River was the upland (Kelly 1979:184). From this point south, waterways drained into the Blackwater River which, in turn, drained into the Albemarle Sound in North Carolina. The Sound, unlike the Chesapeake Bay, had no ports which placed a constraint on settlement and early planters trying to get products to markets. It is likely for this reason that the land was worth less than that closer to the James River. In the 1690s, the average land values were 51.1 pounds of tobacco per acre along the James and only 16.9 pounds around the Blackwater (Atkins 2008).

Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland (Figure 5-3). The swamps that drained into the Blackwater River appear to have been numbered north to south. For example, Second Swamp (also known as Delk's Swamp, Passenger Swamp, and Pouches Swamp) extends south through the study area (King 1993:441).

Several swamps drain into the Blackwater. Settlers, and Virginia Indians before them, would have found an abundance of game in the swampy lands (Bohannan 2002:75). It appears that patenting of land around Second Swamp began in the mid-seventeenth century. For example, large landholders in the vicinity of the swamp in Isle of Wight County include Robert Flack, George Moore, and Job Bearly ("Isle of Wight County Records" 1899).

As indicated earlier by the Surry County historian, lands on the south side of the James River had ample forests. This would lead to a second good produced by the region: timber. Timber was exported as early as the European settling of the colony when Captain Newport took oak poles back to England for ships' masts in 1607 (Rouse 1968:33). This industry continues to the present day. The original use of Hog Island to keep hogs portended to another industry in the region: the raising of hogs. Many dwellings had large, deep, brick cellars which could be used for the storage of bacon and lard, among other things. As such, a trade in bacon began and continued to the present. Bacon was traded in the West Indies for sugar, coffee, and rum (Morrison and Gwaltney 2006). With the growth and success on the south side, a new county was created in 1652. It was called Surry in reference to London south of the Thames River, Surrey (Rouse 1968:18). The original county extended south to the North Carolina border (Apel and Watson 2006:29).

The relative calm that had settled within the colony would soon be disrupted with Bacon's Rebellion in 1676. Nathaniel Bacon and his followers led a revolt against their perceived aggressors, American Indians, and the Governor of Virginia, Sir William Berkeley. In Surry County, Bacon's supporters seized an early dwelling owned by Arthur Allen, about three miles northeast of the study area. The dwelling may have been used as a fort, possibly leading to the name of Bacon's Castle (Bohannan 2002:16). Unrest would repeat in the region in the early eighteenth century. Slave insurrections were planned in 1709 and 1710 in Surry and Isle of Wight counties. In the 1709 plan, the foiled uprising involved both African and American Indian slaves (Holloway n.d.).

After the first legal settlement south of the Blackwater River in 1701, settlement quickly accelerated. By 1730, there were more residents south of the Blackwater than north for the first time leading to the creation of new counties from Isle of Wight and Surry counties in the 1740s and 1750s (Atkins 2008). Within one mile of the study area, some dwellings were being constructed by this time. For example, the Stratman House (VDHR #090-0051) was built c.1750.

Figure 5-3: Detail of *Virginia and Maryland as it is planted and inhabited this present year 1670* depicting the vicinity of the study area. Source: Library of Congress

COLONY TO NATION (1750 – 1789)

The economy continued to grow as additional agricultural land was cleared and cultivated. Tobacco continued to be the principal crop during this period, however as the century entered the fourth quarter the tobacco economy began to falter. Severe soil depletion from continuous cultivation of tobacco, particularly in the sandy soils in the counties that were not conducive for growing tobacco, coupled with the collapse of the European tobacco market precipitated a shift the economy and farmers began to diversify. The farms in Isle of Wight County at this time were typically between 500 to 1,700 acres (David 2007:9).

To aid in getting their goods to market, two early major north-south roads extended through the two counties; the study area was situated between them (Figure 5-4). Additionally, the village of Surry, six miles northwest of the study area, grew as a crossroads. A stagecoach route connecting Petersburg and Portsmouth crossed the town by 1787 (Apel and Watson 2006:18). By this time, the town boasted of two stores, a tavern, an armory, and a cotton factory (Apel and Watson 2006:18). Smithfield officially became a town in 1752 and the main stage road from Norfolk to Richmond passed through it (Morrison and Gwaltney 2006).

While the market for crops grown in Virginia and throughout America was in high demand in European markets, tensions between the colonies and England began to put a strain on trade. At the end of the Seven Years' War (or the French and Indian War in North America) in 1763, the

British government had an immense amount of debt. To pay it, Parliament imposed heavy taxes on its subjects and tightened the administration of trade and navigation acts (Salmon 1983:22). These actions sparked a strong response from the colonies. In 1774, the Virginia Convention adopted resolves against the importation of British goods and the importation of slaves. It also required each county to form a volunteer company of cavalry or infantry to prepare for an armed conflict.

Counties on the south side of the James River prepared to fight, supplying men and materials to the cause (Atkins 2008). For example, in addition to the "725 men of military age", residents of Isle of Wight County provided relief vessels and financed privateering vessels (King 1993:64; David 2007:9). Additionally, the seventeenth century fort on Burwell Bay was fortified and renamed Fort Boykin (David 2007:9). The British passed through the region twice under British Cavalry Colonel Tarleton. He and his men made a raid on Smithfield with the intent to destroy the records; the records were previously removed. The British left a wake of destruction wherever they went (Morrison and Gwaltney 2006).

Following the Battle of Greenspring, the main body of the British Army under Charles Cornwallis crossed the James River traveled to Portsmouth. Though no battles were fought in Isle of Wight and Surry counties, the war was won a mere 18 miles northeast of the study area on the Virginia Peninsula.

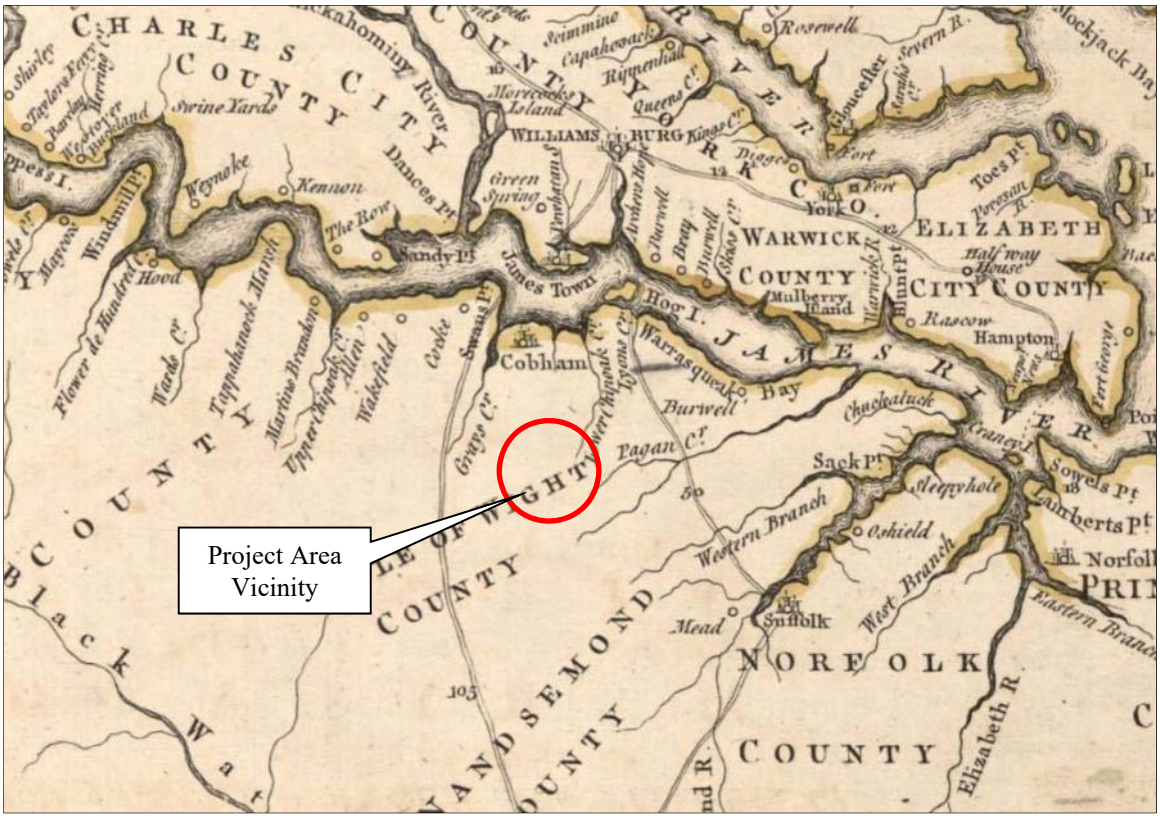

Figure 5-4: Detail of *A map of the most inhabited part of Virginia….*, by Fry in 1755, depicting the vicinity of the study area. Source: Library of Virginia

EARLY NATIONAL PERIOD (1789 – 1830)

Following American independence, Virginia entered a period of considerable change. The intensive tobacco cultivation previously pursued in the area had succeeded in severely depleting the area's soils of much-needed nutrients, making the crop unprofitable and leading farmers to explore other options. Over time, farmers in southeast Virginia turned to corn and grains, cotton, orchards, livestock, and finally peanuts and soybeans (King 1993:192). The value of farmland in the region increased dramatically in the early nineteenth century (Agee 1969). In Surry County, for example, the value of land, per acre, in 1800 was $1.65; in 1820 it had jumped to $4.81 (Agee 1969:36).

The almost exclusively agrarian society was beginning to accommodate urban centers and small hamlets, although farming continued to be the primary means of livelihood (Traceries 1993). While the population remained relatively steady, there was a shift to the southern half of the county as people were enticed by the open lands and inland roadways. At the first federal census in 1790, Surry County had 6,227 residents and Isle of Wight County had 9,028 (USCB). During this period the population of each county rose slightly to 7,109 residents in Surry and 10,517 in Isle of Wight (USCB).

When war broke out with Great Britain once more in 1811, the young men of Virginia stood ready to fight. Because the War of 1812 was primarily a sea war in Virginia, Norfolk was a highly vulnerable spot though towns along the shores of the state's major rivers were also at risk (King 1993:66). One of the major issues to wealthy white citizens that the war caused concerned slavery and Britain's declaration of freedom if slaves stood alongside the Great Britain.

Among the major issues facing farmers throughout Virginia in the early nineteenth century was that of inadequate roads which hampered their ability to get goods to markets. The poor condition of the network of roads and bridges, lack of navigable watercourses, and long distances to larger markets restricted growth of the area's economy. The solution to these problems was found in the internal improvement movement of the early nineteenth century. The construction and maintenance of roads had long been the responsibility of localities. Finally, in 1816, the General Assembly created the Fund for Internal Improvement and appointed the Board of Public Works to oversee its use; transportation improvement projects would receive the funding they needed to complete projects (O'Dell 1989). By the late 1820s, it appears that several major roads were in the vicinity of the study area (Figure 5-5).

Around the turn of the nineteenth century, dwellings were being constructed within and in the vicinity of the study area. This included the Jones House (VDHR #046-0065, Area D), the Gale Farm (VDHR #046-0066, Area C), the Pons House (VDHR #046-0067, near Area C), the Delk Farm (VDHR #046-0069, near Area E), Dewes Plantation (VDHR #046-0082, near Area E), the Allmond House (VDHR #090-0053, near Area C), the Dais/Ida House (VDHR #090-0059, Area D).

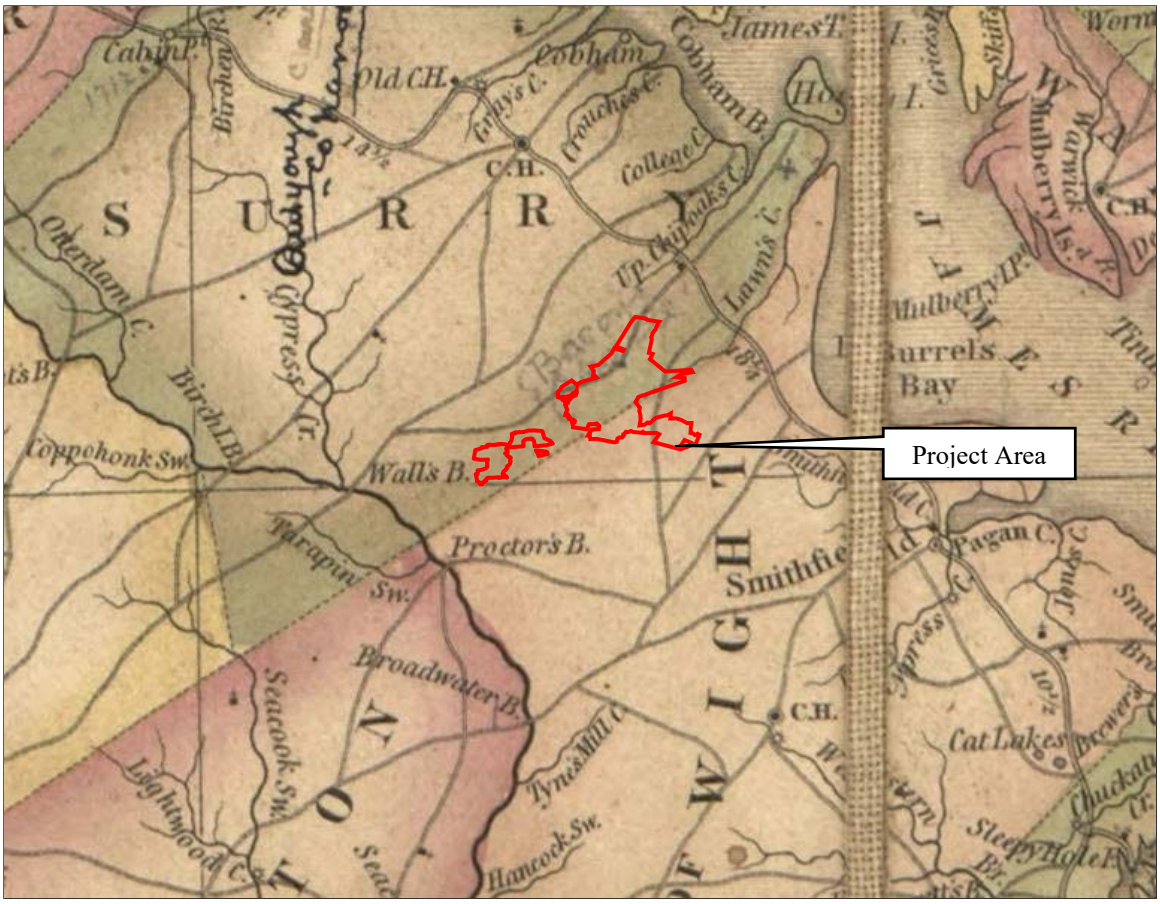

Figure 5-5: Detail of *A map of the state of Virginia*, 1827, depicting the vicinity of the study area. Source: Library of Congress

ANTEBELLUM PERIOD (1830 – 1860)

By the 1830s, a lasting migration from older settled regions of Virginia to lands opening in the west and an agricultural depression affected area's commerce and population. Between 1830 and 1850, the population of Isle of Wight County decreased 11 percent and that of Surry County fell by more than 13 percent (USCB). Despite the drop in population, the enslaved and free black population remained about 50 percent of the total population. The high slave population led to unease and in 1831 there was an insurrection in nearby Southampton County; it became known as Nat Turner's Rebellion. Troops from Isle of Wight, Nansemond, and Surry counties guarded the borders of the counties to prevent an escape of the insurgents to the Dismal Swamp (Drewry 1900:83). The insurrection prompted scared white citizens to strengthen rules regarding slaves and free blacks (Atkins 2008).

Approximately 90 percent of this total population was involved in agriculture and identified as farmers (David 2007:10). The diversification of crops throughout the Commonwealth continued and by 1859 Virginia was producing only 28.4 percent of the nation's tobacco (Agee 1969:21). Crops that took the place of tobacco in southeast Virginia included cotton, corn, and peanuts. Before the Civil War, peanuts, also known as "goober peas" or "ground peas" were little known outside of the southern states (Morrison and Gwaltney 2006). Isle of Wight's first peanut export

was in 1849; the county would eventually become the center of the peanut belt (David 2007:10). Additionally, the ham and bacon industry continued growing. Before the coming of the railroad, the bacon trade reached out 30 to 40 miles into surrounding counties and hogs were driven in by foot from as far away as Kentucky, Tennessee, and North Carolina (Morrison and Gwaltney 2006). The railroad would create a bigger market.

The Norfolk and Petersburg Railroad was chartered in 1851 and completed in 1858, approximately eight miles southwest of the study area, and extended through southern Isle of Wight County (King 1993: 241). The first railroad in Surry County, in 1854, was located at the northern end of the county and was related to the timber business (Atkins 2008).

Despite the number of marshes crossing the study area, structures within it and in the vicinity were common by the mid-nineteenth century (Figures 5-6 and 5-7). Families identified within the study area on Civil War period maps include Jones, White, and Wilson, though the area also includes unidentified houses; a small crossroads may have been forming just outside of the study area (Area C) at Sykes Store by this time. There may have been a mill within the study area (Area C) in 1900 (Figure 5-8).

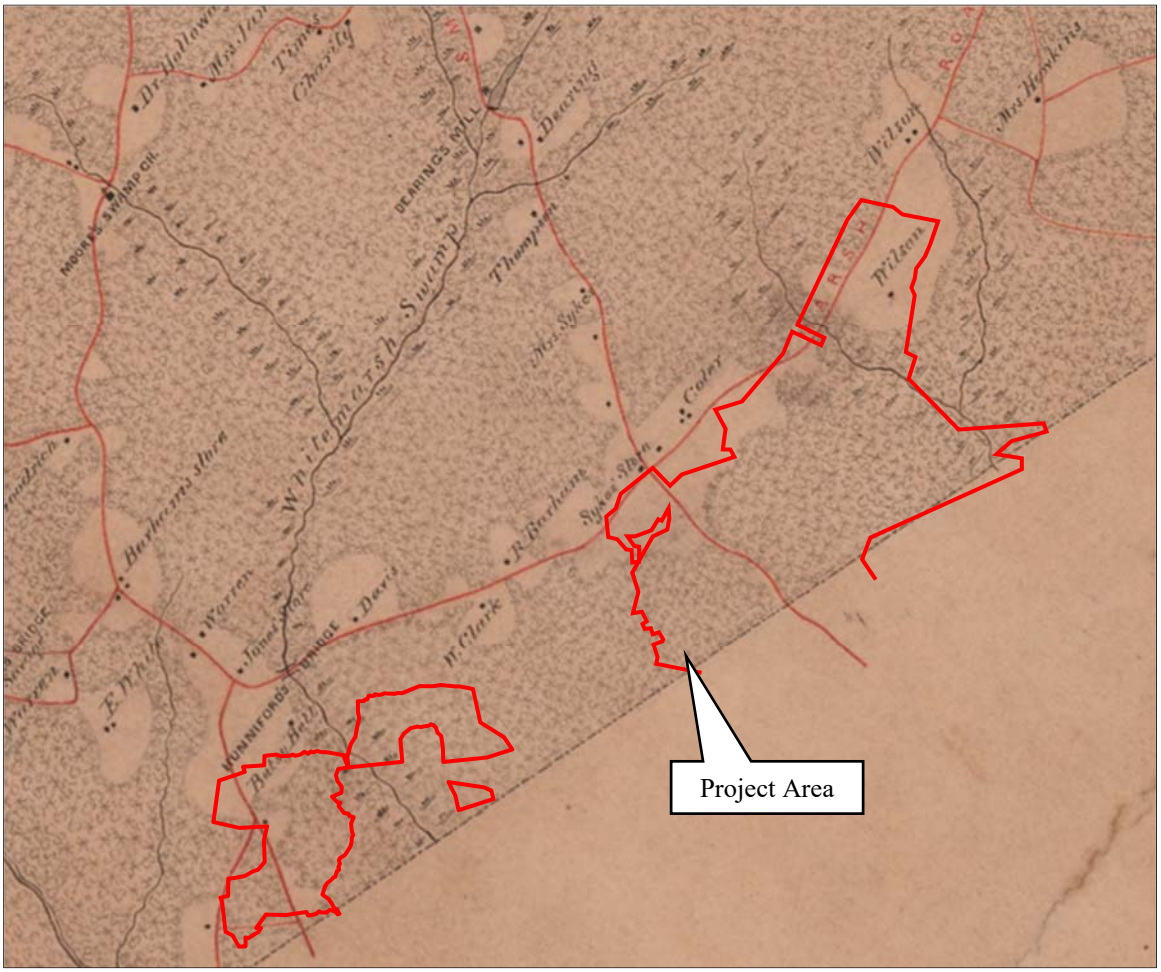

Figure 5-6: Detail of *Map of Surry Sussex and Southampton counties, Virginia*, 1863, depicting the study area in Surry County. Source: Library of Congress

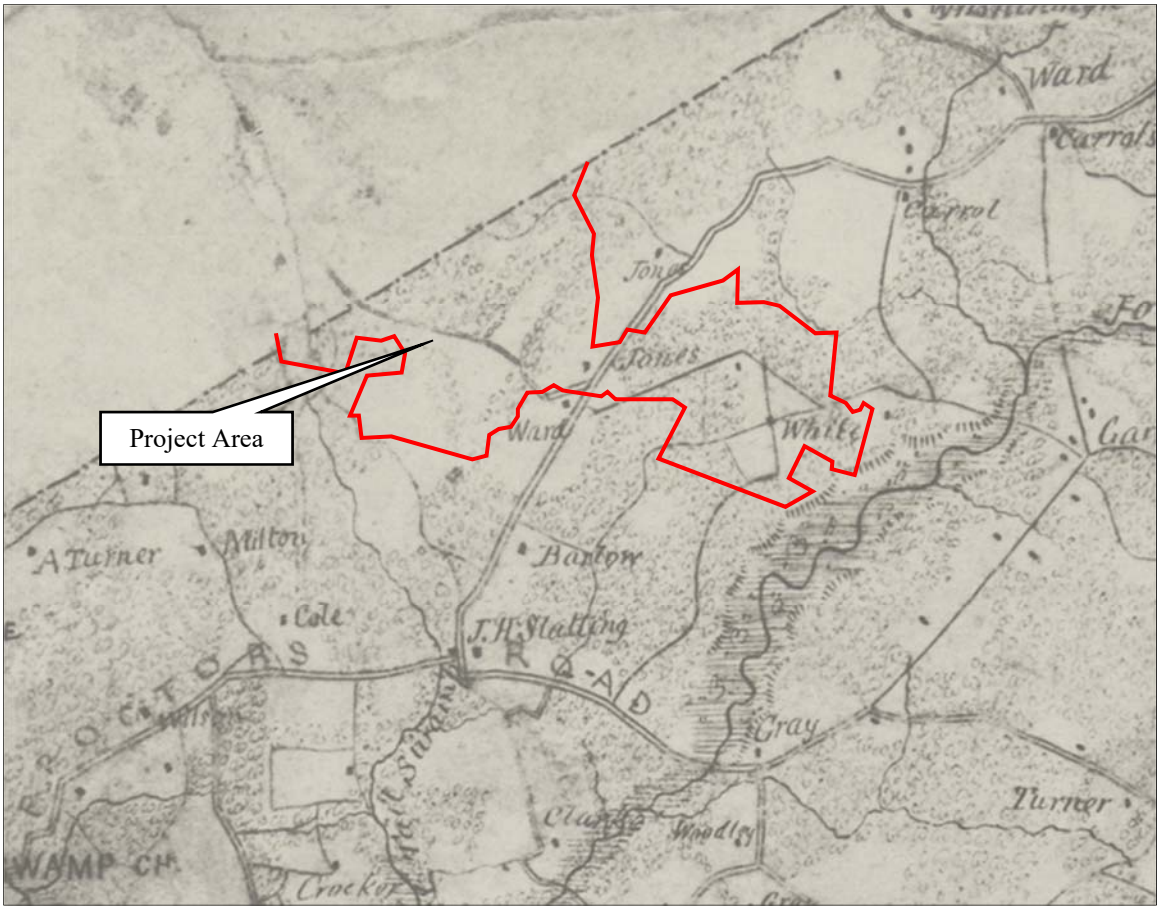

Figure 5-7: Detail of *Map of Isle of Wight and part of Nansemond*, 1864, depicting the study area in Isle of Wight County. Source: Library of Congress

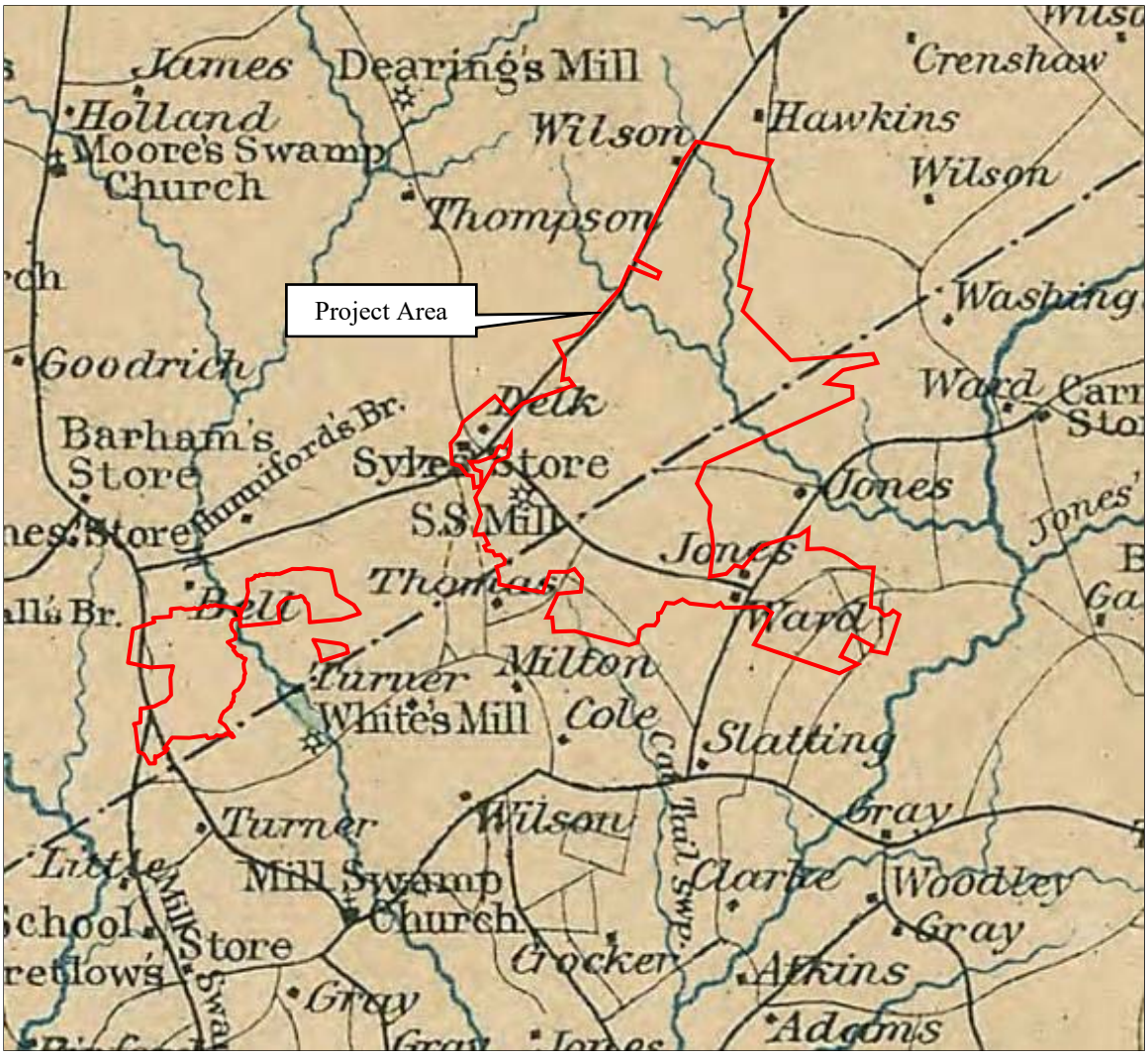

Figure 5-8: Detail of *Preliminary map of a part of the south side of James River, Va.,* 1906, depicting the study area. Source: Library of Congress

CIVIL WAR (1861 – 1865)

As an old, settled area of Tidewater Virginia, Isle of Wight and Surry counties continued to have a large proportion of residents that were enslaved. When the counties voted on the issue of secession on April 17, 1861, both were pro-secession. On the coast of Isle of Wight County, two forts were constructed or reinstituted during the war, Fort Huger and Fort Boykin. With their proximity to Union forces in Hopewell and Petersburg, Surry County soldiers served as scouts (Atkins 2008).

No major battles took place in Isle of Wight or Surry counties. A skirmish did occur in Smithfield in 1864. Early in 1862, Confederates were forced out of the Smithfield area and all bridges were burned and by 1864 Union gunboats controlled the James River. In January of that year, a federal steamer was fired upon by a Confederate contingent in Smithfield. The steamer was soon refloated and got aid from Newport News. The Federals came ashore and forced the Rebels to flee. While waiting for their return boat to Newport News, the Rebels fired upon Union forces. The Federals

were able to board their boat only to get stuck in mud at which point they were taken prisoner and the boat was burned (King 1993:172, 174).

There was also a skirmish in Surry County on the Blackwater River. Confederate soldiers were holding a bridge over the river when, in May, Federals attempted to cross. Having much larger numbers, Union forces succeeded and the Rebels abandoned their position (Atkins 2008).

On the home front, the succulent flavor of Smithfield meat emerged during Civil War. As farms were not operating to the same capacity as previously, farmers began to let pigs root in fields where peanuts had been dug (Rouse 1968:15). They found peanut-fed hogs far more palatable than those which had foraged the woods (Rouse 1968:15).

RECONSTRUCTION AND GROWTH (1865 – 1917)

While no large battles were fought in Isle of Wight and Surry counties, the economies were devastated and redevelopment of the agricultural economy was slow. Though Surry County was generally quiet after the war, around Bacon's Castle there was unrest between former enslaved individuals and the white population. In 1868 and 1869, homes, schools, and churches were burned (Atkins 2008). In Isle of Wight County, residents feared armed former slaves who refused to work (King 1993:181). A resolution was made to disarm them. This resolution stated "That as a general thing the Negroes are indisposed to hire themselves out by the year and thus rendering the cultivation of the land exceedingly uncertain. The court therefore respectfully asks that they may be compelled, in some way, to engage in some regular calling whereby they may be enabled to support themselves and render a public service" (quoted in King 1993:181).

The longstanding agricultural economy of Tidewater Virginia began to recover. The production of peanuts increased, their cultivation improved, and, by the aid of special implements, their production was cheapened. The value of the crop was estimated to be not less than three million dollars for the nuts alone (Morrison and Gwaltney 2006). P.D. Gwaltney and Company was created in 1870 for the shipping of ham and peanuts. The company grew dramatically in the late nineteenth century and by 1898 it had become the largest peanut company in the world (David 2007:13). Added to this is the value of the peanut vines in serving as a forage crop for horses and cattle and nuts on the ground for hogs (Morrison and Gwaltney 2006). In addition to peanuts, Isle of Wight County produced oats, potatoes, fruits, vegetables, and oysters (Morrison and Gwaltney 2006). Farms, growing peanuts and other products, were sprinkled throughout the study area.

Timbering also prospered during this period aided by northern investors (Rouse 1968:34). For example, David Steel, of Delaware, began the Surry Lumber Company in 1873 (Rouse 1968:34). The town of Dendron, about six miles west of the study area, grew around this company and the construction of several sawmills (Apel and Watson 2006:22). The lumber company also chartered the Surry, Sussex & Southampton Railway (SS&S) to haul products (Apel and Watson 2006:22). A small lumber railroad would eventually extend through the study area (Areas C and D) from Passenger Swamp to the town of Surry. Included among the various lumber companies in Isle of Wight were Watkins Lumber Company, Cumberland Lumber Company, and Kirk Lumber Company (David 2007:13).

Finally, Smithfield's early trade in bacon and ham gave rise to attention in the feeding and slaughtering of hogs and curing of bacon. In the early twentieth century, Smithfield's shipment of cured hams was about 40,000 (Morrison and Gwaltney 2007). With these important industries, the financial condition of counties improved by the close of the nineteenth century and population increased. Between 1870 and 1910, the population of Isle of Wight County increased by 79 percent from 8,320 residents to 14,929; the population of Surry County increased by 74 percent from 5,585 inhabitants to 9,715 (USCB).

As population increased, commerce also grew, particularly along the intersections of major inland roadways in the form crossroad stores. With improved inland transportation corridors, crossroads stores became more common. Many of these crossroads merchants took advantage of the expanded postal system and operated post offices from their stores. Between 1865 and 1900, the number of post offices increased dramatically from 28,882 post offices nationwide to 76,688 post offices in 1900 (David 2007:15). A 1906 map of Virginia illustrates a number of post offices in the vicinity of the study area (Figure 5-9). Rural free delivery came to the county in 1907. This would eliminate the need for the multiple post offices found in crossroads stores. Post offices in the vicinity of the study area include Bob's, Pons, Old Mill, Berryman, and Itata.

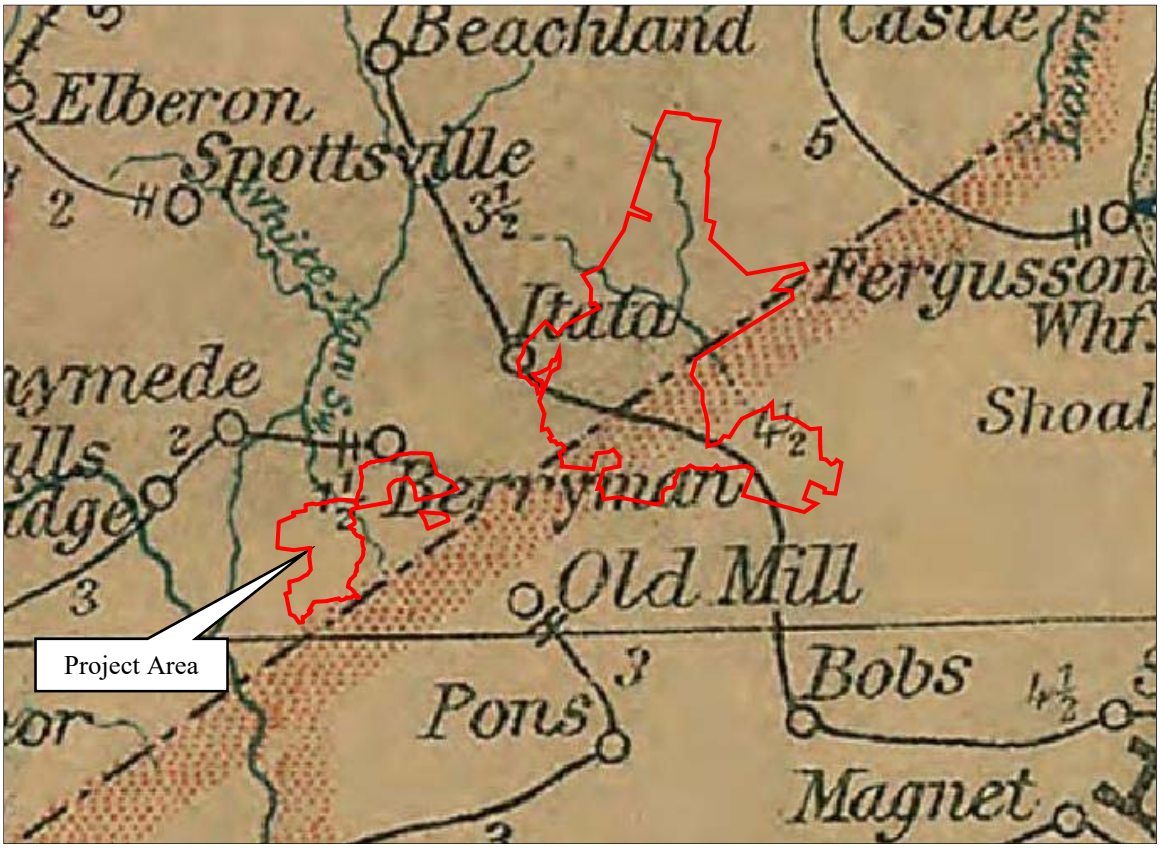

Figure 5-9: Detail of *Post route map of the states of Virginia and West Virginia,* 1906, depicting the study area. Source: Library of Congress

WORLD WAR I TO WORLD WAR II (1917 – 1945)

The peanut, lumber, and hog industries in Tidewater Virginia continued as the twentieth century progressed. The peanut industry took a downfall in 1921 when P.D. Gwaltney's factories were destroyed by fire. Although processing of the legume ended in Smithfield, neighboring Suffolk became a major peanut processing hub with the growth of Planters Peanuts (David 2007:18). With the loss of the peanut factories, in Isle of Wight County the primary industry transitioned to meat packing, most notably of ham (Morrison and Gwaltney 2007).

The Surry Lumber Company reached its peak in the 1920s (Apel and Watson 2006:22). However, the supply of trees decreased leading to the closing of mills in 1927 and the termination of the SS&S Railway (Apel and Watson 2006:23).

Among other agricultural endeavors in the county was the dairy industry. Cows had long been important in the region, requiring little attention as they were able to forage in the marshes and swamps. By the 1930s, there were many dairies (King 1993:208).

The two world wars' demanded sacrifices from the Commonwealth's residents while they also prepared the way for new opportunities. Residents of the counties did their part to serve the war effort, either by continuing to produce food and products for use or enlisting in the military as members of Simmons and Bailey families of Surry County, possibly in the vicinity of Area C and D of the study area, did in World War II.

As farmers faced hardships and the industry became more mechanized, the population in the counties fell. While the population of Isle of Wight County population decreased by seven percent from 14,433 to 13,381 residents; that of Surry County fell by 33 percent from 9,305 to 6,193 inhabitants (USCB). Despite hardships brought on by weather, mechanization, and the Great Depression, agriculture remained the economic mainstay of counties and commercial centers provided processing facilities for the products and access to export goods (David 2007:18).

Topographic maps from 1907 and 1919 clearly illustrate the number of swamps and pocosins within the study area as well as the development that had occurred along the major and minor roads (Figure 5-10).

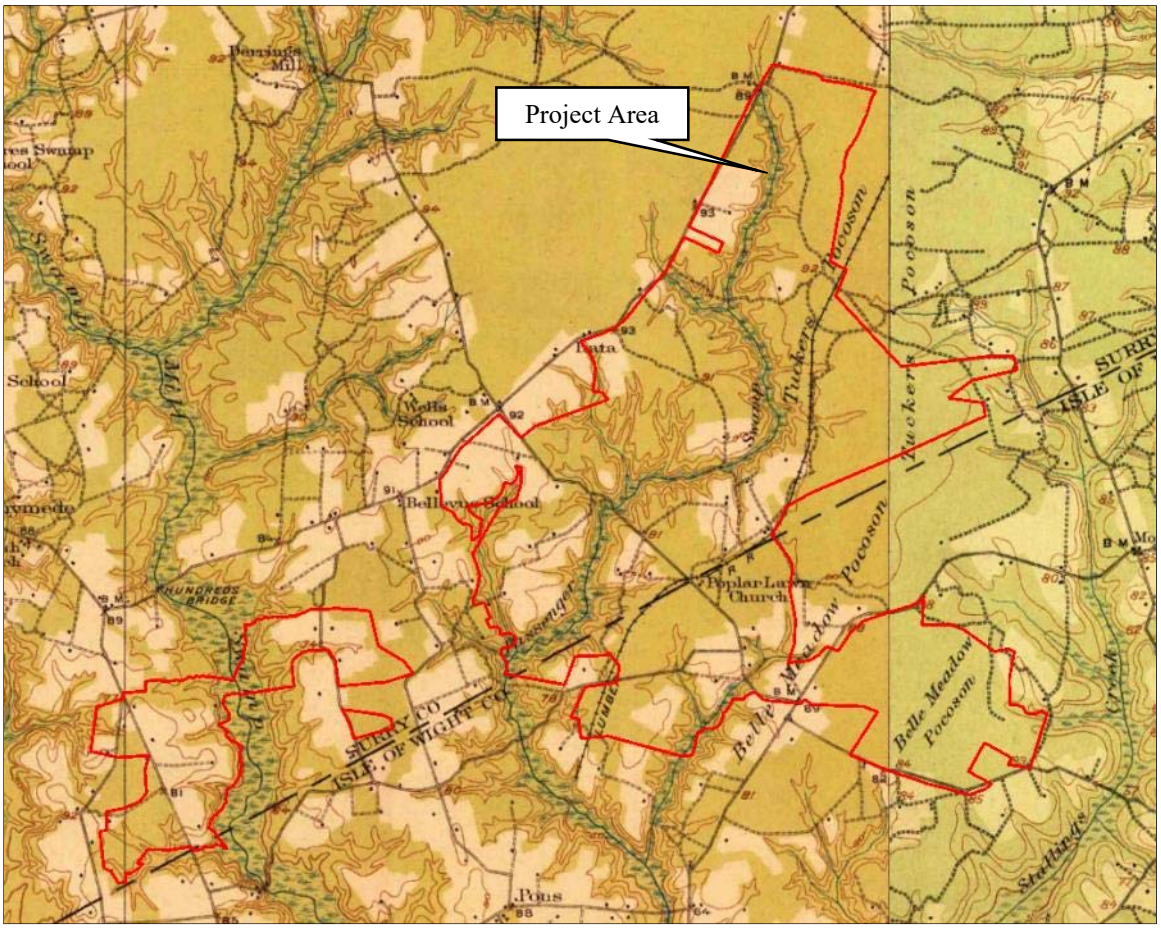

Figure 5-10: Detail of topographic maps *Surry* (1919) and *Yorktown* (1907) depicting the study area. Source: USGS

NEW DOMINION (1945 – PRESENT)

The end of World War II brought with it a building boom that would begin to change the character of Virginia as a whole and the counties in which study area lay, particularly Isle of Wight County. With its proximity to Newport News, Portsmouth, and Norfolk, the county began to become a bedroom community. With the spread of the cities and improved transportation routes, the northern half would be impacted, and more single family dwellings began to line the roadways shielding the vast open field behind (David 2007:19).

The face of agriculture also began to change. By the end of World War II, Virginia was no longer the leading producer of peanuts. In 2002, the end of government support and allotment forced many smaller farmers out of business. While peanuts are still a force in Western Tidewater and they continued to be the most reliably profitable crop even for smaller-scale producers, China and Brazil are now the dominant players in the global peanut market (Bearinger n.d.). Over time, the dairies in the region also went out of business (King 1993:209).

Conversely, the meat packing industry of Isle of Wight County and the hog and cattle farms in Surry County would continue to grow, and the timbering industry in the region as a whole contributes its economy. Isle of Wight County would become home to two Fortune 500 companies:

Smithfield Foods and International Paper Company. Because of the significant amount of timbering that has taken place throughout the Commonwealth, in the second half of the twentieth century Virginia Forests, Inc. became active (Rouse 1968:37). Among their work was providing pine seedlings to any landowners willing to plant them in cut-over forests and eroding fields (Rouse 1968:37). In addition to stabilizing the soil it would continue the industry since the trees would be ready for harvesting after a period of twenty years (Rouse 1969:37).

Modern developments are evident in the counties and the study area. Pipelines and transmission lines were laid within, and in the vicinity of, the study area by the mid-twentieth century (Figure 5-11). In 1971, construction began on Virginia's first nuclear energy plant on Hog Island (Apel and Watson 2006:27). In the early twenty-first century, Beaver Dam Airpark was opened in Area A of the study area. Despite changes, agriculture continues to be an economic mainstay in Isle of Wight and Surry counties with important crops being cotton, soy, and of course peanuts (Morrison and Gwaltney 2006). Within the study area, higher areas appear to have continued to be farmed while lower areas along swamps or pocosins appear to have been timbered (Figure 5-12).

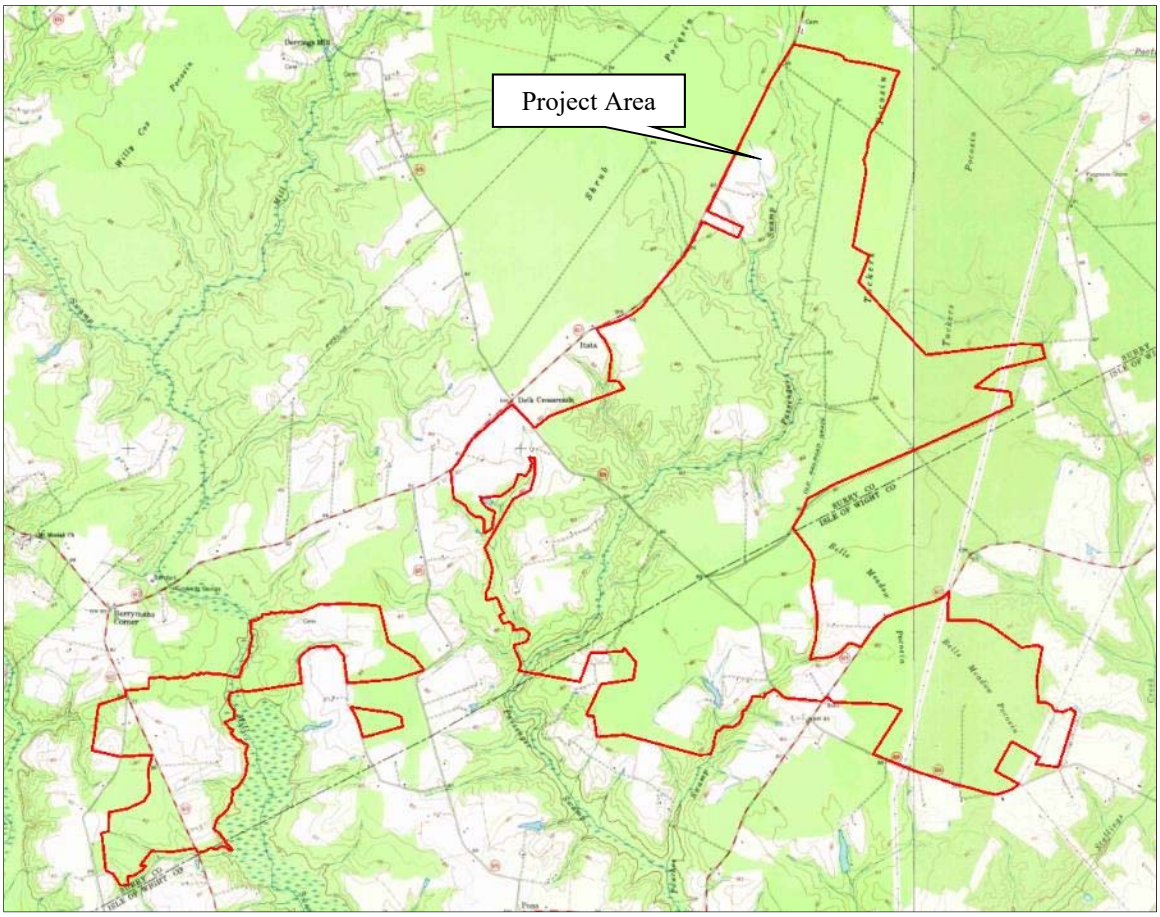

Figure 5-11: Detail of topographic maps, *Bacons Castle* (1969) and *Runnymede* (1968) depicting the study area. Source: USGS

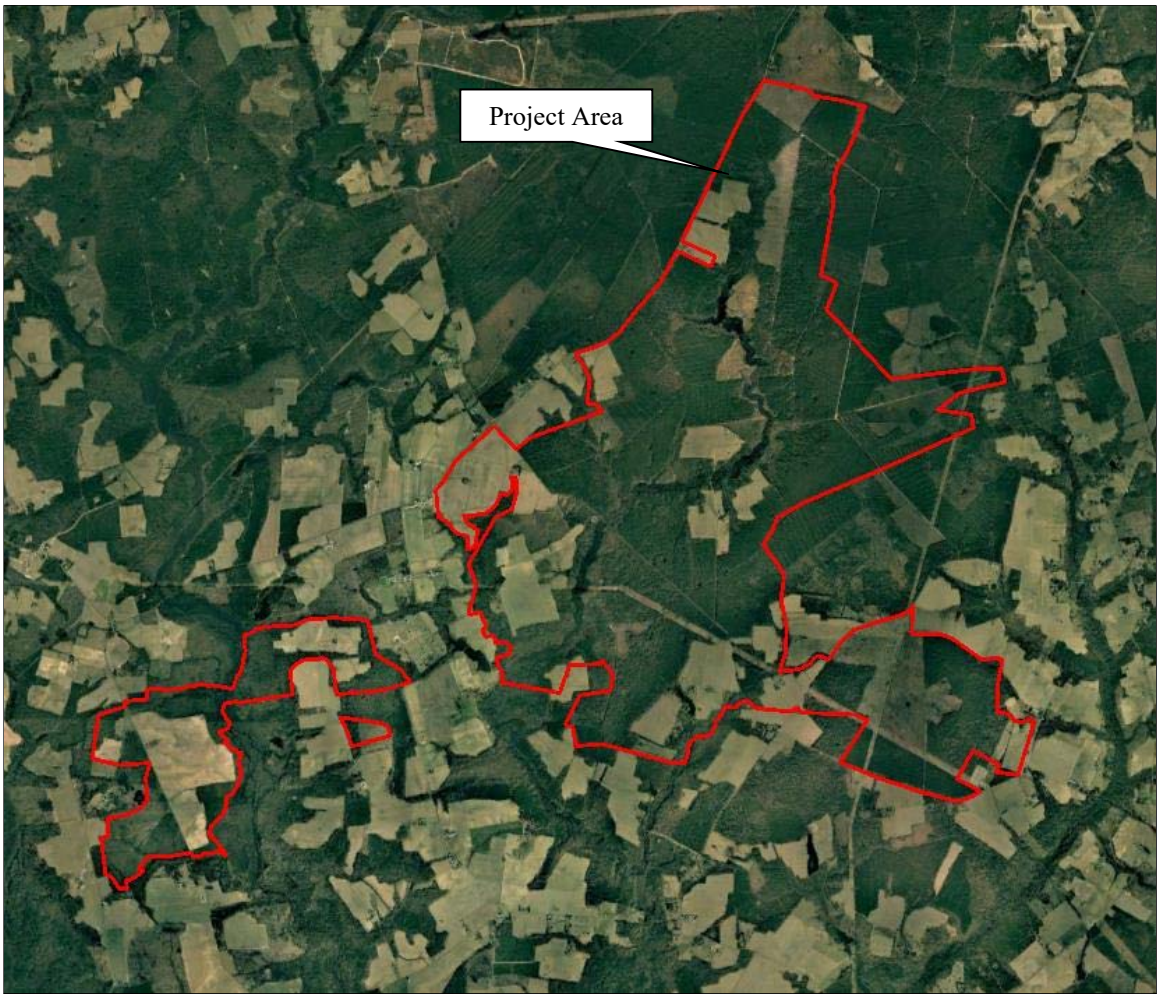

Figure 5-12: A 2007 aerial depicting the study area. Source: Google Earth

6. FIELD SURVEY RESULTS

ARCHITECTURAL FIELD RESULTS

The architectural resources survey for the Cavalier Solar Project resulted in the identification and recordation of fifty-eight (58) architectural resources greater than 50 years of age (constructed in 1970 or earlier) located within the one-half mile architectural survey area, eleven (11) of which are located within the project area. Of the surveyed resources, nine (9) were previously recorded (VDHR# 046-0064/0067, 046-0069, 090-0053, 090-0055, 090-0058, 090-0059) and forty-nine (49) were newly recorded during this Phase I Survey (VDHR# 046-5548/5569, 090-5146/5168, 090-5171/5174). Three of the previously recorded sites were found to have been demolished (VDHR# 090-0053, 090-0055, and 090-0059), and one has been relocated out of survey area and renumbered (VDHR# 046-0067 now VDHR# 046-5258). VCRIS site file forms were prepared or updated for each recorded resource.

The 54 extant resources within the survey area and surveyed as part of this effort consist primarily of domestic buildings and farmsteads from the late-eighteenth to mid-twentieth century. Also surveyed were a number of isolated agricultural buildings not associated with a standing dwelling, as well as several small rural cemeteries.

The survey area occupies a large rural area of eastern Surry and western Isle of Wight counties, situated roughly four miles inland from Burwell's Bay on James River. There are no incorporated or unincorporated communities within or in the immediate vicinity of the survey area. It is crossed or bordered by several regional and local transportation corridors including White Marsh Road and Burwell's Bay which both generally travel northeast-southwest through the northern and southern extents of the survey area respectively, and Beechland Road which extends northwest-southeast centrally through the survey area. The landscape of the survey area is characterized by mostly flat to gently rolling terrain that is a mix of open field and woodland bisected by low wetlands, swamps, and creeks. Most of the open and cleared areas are put under agricultural use while the woodlands are a mix of wild growth and planted timber.

Most development in the area consists of early- to mid-twentieth century single dwellings set in clusters on small rural lots bordering the primary roads with occasional earlier farmsteads set further back on larger agricultural properties.

The previously recorded resources represent the earliest extant properties in the survey area and consist of late-eighteenth and early-nineteenth century homes and plantations. One of these properties has previously determined eligible for listing in the NRHP by the VDHR and the rest have not been previously evaluated. Evaluation at this time revealed that three additional of these properties retain moderate to high historical integrity and represent early settlement and agricultural development in the region and are considered potentially eligible for listing. One additional previously recorded resource has been relocated out of the survey area and was not evaluated as part of this effort, and the remaining three have been demolished since they were previously surveyed.

Most newly surveyed resources were modest frame and masonry dwellings built in the late-nineteenth to third-quarter of the twentieth century and reflect national trends in building styles of that period such as Folk Victorian, Cape Cod, Minimal Traditional, and Ranch single dwellings. A number of Vernacular homes, including I-houses with various stylistic influences were also recorded throughout the project area. Many of the surveyed homes are set on large rural properties and include typical domestic and agricultural outbuildings. Several later homes, set on small rural lots subdivided from larger parcels were also scattered throughout the survey area. There were also two turn-of-the-twentieth cemeteries identified in the survey area. All but one of the newly surveyed properties do not appear to reflect any unique or significant design or historical associations, and as such, are recommended to be not eligible for listing in the NRHP individually or collectively. One newly recorded resource, however, is recorded as having been built circa 1790 and survey found that it continues to reflect its historic character. While further study and analysis should be conducted to fully document the history and development of the building, it is considered potentially eligible for listing in the NRHP at this time.

Provided in the following pages are a table of all surveyed resources (Table 6-1), a map with the location of each resource surveyed (Figure 6-1), and descriptive narratives and photographs of each of the identified historic resources. Resource narratives include a physical description, discussion of history, integrity, and NRHP-eligibility. For those resources considered NRHP-eligible, an assessment of project impacts is also provided.

Table 6-1: Architectural resources surveyed in Surry and Isle of Wight Counties. Bold Font denotes resource is NRHP-Listed or Eligible. Orange Highlighted resources are located directly within the project area.

VDHR ID#	Resource Name/Address	Year Built	NRHP Eligibility
046-0064	**Carroll House, 11150 Burwells Bay Road**	**c.1812**	**VDHR: NRHP-Eligible**
046-0065	**Jones House, 9355 Burwells Bay Road**	**1780**	**D+A: Potentially NRHP-Eligible**
046-0066	**Gale Farm, 9310 Jones Drive**	**1798**	**D+A: Potentially NRHP-Eligible**
046-0067	Pons House, 12170 Modest Neck Road	1833	D+A: Relocated outside of the survey area and now renumbered #046-5258. Not Evaluated as part of this effort
046-0069	**Delk Farm, 10114 Mill Swamp Road**	**1775**	**D+A: Potentially NRHP-Eligible**
046-5548	House, 10522 Burwells Bay Road	1900	D+A: Not Eligible
046-5549	House, 7027 Mullet Drive	1920	D+A: Not Eligible
046-5550	House, 10126 White Hill Trail	1890	D+A: Not Eligible
046-5551	House, 10106 White Hill Trail	1944	D+A: Not Eligible
046-5552	House, 10088 White Hill Trail	c.1930	D+A: Not Eligible
046-5553	House, 9621 Burwells Bay Road	1933	D+A: Not Eligible
046-5554	House, 10338 Burwells Bay Road	1940	D+A: Not Eligible
046-5555	House, 9352 Burwells Bay Road	1957	D+A: Not Eligible
046-5556	House, 9527 Mill Swamp Road	1927	D+A: Not Eligible
046-5557	House, 9580 Mill Swamp Road	1900	D+A: Not Eligible
046-5558	House, 8396 James Wilson Way	1898	D+A: Not Eligible

VDHR ID#	Resource Name/Address	Year Built	NRHP Eligibility
046-5559	House, 8324 James Wilson Way	1959	D+A: Not Eligible
046-5560	House, 10382 Mill Swamp Road	1935	D+A: Not Eligible
046-5561	House, 11050 Mill Swamp Road	1862	D+A: Not Eligible
046-5562	House, 11100 Mill Swamp Road	1956	D+A: Not Eligible
046-5563	House, 11128 Mill Swamp Road	1941	D+A: Not Eligible
046-5564	House, 11292 Mill Swamp Road	1951	D+A: Not Eligible
046-5565	House, 11301 Mill Swamp Road	1949	D+A: Not Eligible
046-5566	**House, 11231 Mill Swamp Road**	**1790**	**D+A: Potentially NRHP-Eligible**
046-5567	House, 11063 Mill Swamp Road	1936	D+A: Not Eligible
046-5568	House, 11073 Mill Swamp Road	1950	D+A: Not Eligible
046-5569	House, 11063 Mill Swamp Road	1936	D+A: Not Eligible
090-0053	Allmond House, 10532 White Marsh Road	c.1810	D+A: Demolished
090-0055	Delk Crossroads Farm, 12251 White Marsh Road	c.1910	D+A: Demolished
090-0058	Bell Farm Kitchen, 7098 Beechland Road	c.1900	D+A: Not Eligible
090-0059	Dais/Ida House, 8229 Beechland Road	c.1800	D+A: Demolished
090-5146	Cemetery, 14664 White Marsh Road	c.1900	D+A: Not Eligible
090-5147	House, 12283 White Marsh Road	1898	D+A: Not Eligible
090-5148	House, 11649 White Marsh Road	1964	D+A: Not Eligible
090-5149	House, 435 Bellevue Road	c.1920	D+A: Not Eligible
090-5150	House, 392 Bellevue Road	1949	D+A: Not Eligible
090-5151	House, Bellevue Road	c.1950	D+A: Not Eligible
090-5152	House, 11372 White Marsh Road	c.1900	D+A: Not Eligible
090-5153	House, 11119 White Marsh Road	c.1940	D+A: Not Eligible
090-5154	House, 10837 White Marsh Road	c.1930	D+A: Not Eligible
090-5155	House, 2557 Moonlight Drive	1957	D+A: Not Eligible
090-5156	House, 968 Bellevue Road	c.1910	D+A: Not Eligible
090-5157	House, 6452 Mullet Drive	1963	D+A: Not Eligible
090-5158	House, 6420 Mullet Drive	1959	D+A: Not Eligible
090-5159	House, 9789 White Marsh Road	c.1910	D+A: Not Eligible
090-5160	House, 9091 White Marsh Road	1905	D+A: Not Eligible
090-5161	House, 9100 White Marsh Road	1949	D+A: Not Eligible
090-5162	House, 274 Berrymans Corner Road	c.1890	D+A: Not Eligible
090-5163	House, 337 Berrymans Corner Road	1942	D+A: Not Eligible
090-5164	House, 285 Berrymans Corner Road	c.1900	D+A: Not Eligible
090-5165	Simmons and Brown Cemetery, Berrymans Corner Road	c.1921	D+A: Not Eligible
090-5166	House, 1122 Berrymans Corner Road	c.1930	D+A: Not Eligible
090-5167	House, 1097 Berrymans Corner Road	c.1965	D+A: Not Eligible
090-5168	House, 1676 Berrymans Corner Road	1870	D+A: Not Eligible
090-5171	Diana Southall Carroll Cemetery, White Marsh Road	1887	D+A: Not Eligible
090-5172	Mary Person Cemetery, Beechland Road	1829	D+A: Not Eligible
090-5173	Shed, 7300 Beechland Road	c.1920	D+A: Not Eligible
090-5174	House, Berrymans Corner Road	c.1920	D+A: Not Eligible

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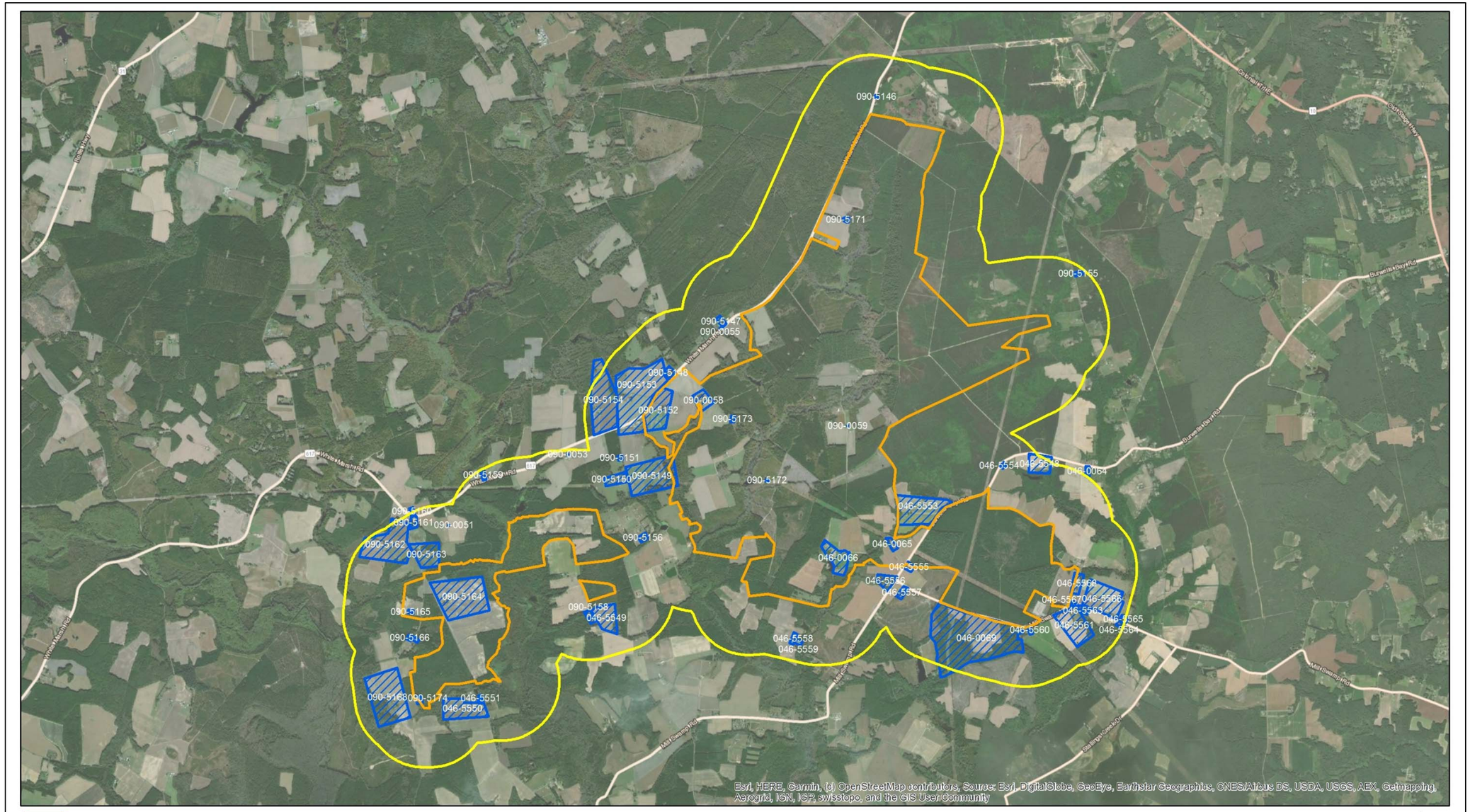

Figure 6-1: Location of surveyed architectural resources in relation to the project area

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RESOURCE NARRATIVES

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VDHR ID# 046-0064
Carroll House, 11150 Burwells Bay Road

This two-story frame dwelling was built in 1812 according to local records and exhibits a Federal style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding and a side gable roof covered in asphalt shingles. The roof is pierced by four exterior end brick chimneys and gabled dormers on the one and a half story original portion. Each of the four dormers; two on the front and two on the back; contains a six over six double-hung sash window. The main entrance is offset to the west side of the two-story portion of the dwelling and is sheltered by a front gable portico supported by Doric columns. There is a divided fanlight transom above the main entrance. Fenestration on the first and second-floor consists of single, six over nine double-hung sash windows. Ornamentation is limited to the columns on the porch and dentils on the cornice along the main roofline.

This dwelling is located on the south side of Burwells Bay Road on a rural lot. The property is accessed by a gravel driveway that leads to the front of the dwelling and to a garage on the side of the dwelling. Aerial photography shows a barn and silo in the rear of the homesite, but these are not visible from the public right of way. There is an agricultural field to the west and woods to the right of the homesite.

This property is an example of a typical early-nineteenth-century, Vernacular style dwelling in the region with a slightly later Federal-style addition. The original circa 1812 portion of the houses is the one-and-a-half story block at the north end built by Gray Carroll, and was the center of a 2,000-acre plantation known as Carrollton. The two-story portion was added circa 1850 by his grandson George W. Carroll. According to local history, the home was vacant for much of the twentieth century, leaving it deteriorated and all outbuildings lost. The property has recently been restored.

Although it has been updated and renovated over time, it continues to retain much of its characteristic form and features that reflect its early nineteenth century construction. Further, the

building continues to be situated at the center of a large agricultural property. As such, the resource remains as a relatively intact and good example of early plantation architecture in the region and was previously determined eligible for listing in the NRHP by the VDHR. At this time, the building continues to represent a good example of early plantation architecture in the region and is still considered ***eligible for listing in the NRHP***.

As a ***potentially NRHP-eligible*** resource, an assessment was conducted to determine whether the project would pose any impacts to its eligibility. Improvements related to the Cavalier Solar Project are proposed to take place within the landscape to the southwest of the Carroll House property. While the associated agricultural fields are set roughly 0.30-miles from the project area at their nearest point, the house itself is set over 0.53-miles away. Beyond the agricultural fields, and stretching between the property and the project area, is a thick treeline and additional farm property. An existing high-voltage transmission line and right-of-way also crosses the rear corner of the property and extends between the property and the project area.

The Carroll House itself is set within a small manicured homesite near Burwells Bay Road with a grassy front lawn, tree-lined driveway, and fenced backyard. The home faces Burwells Bay Road to the north and large agricultural fields border the property to the rear and west side. Bordering the property to the east side is a high-voltage transmission line corridor that crosses on an angle through the open field to the rear.

To assess whether the project or any associated components may be visible from the Carroll House property, a viewshed assessment was conducted. Inspection was performed and photographs taken from the public Burwells Bay Road right-of-way to document existing setting, visibility, and lines of sight (Figures 6-2 through 6-5). Inspection was not performed from the private property on which the Carroll House is located, however, a review of aerial photography and topographical maps was conducted.

This assessment found that the historic setting around the resource remains rural, however, is already substantially compromised by the presence of the existing transmission line. This feature is highly visible from the public road when looking towards the resource and is likely visible from the resource as well. The proposed solar panels to the southwest of the resource are in the direction of the rear, and the views in this direction are of agricultural field and the existing high-voltage transmission line as it crosses through the field. The project area and proposed improvements would be located behind an existing treeline along the rear edge of the field that screens views beyond. Because of the distance from Burwells Bay Road in the vicinity of the resource and the treeline that extends continuously between it and the project area, the proposed solar panels will not likely be visible from public right-of-way, nor be visible from the Carroll House.

As such, while the historic setting of the Carroll House is already compromised by a transmission line, the improvements related to the Cavalier Solar Project will not likely be visible and therefore not introduce any additional nonhistoric or compromising characteristics. Therefore, the Cavalier Solar project is recommended to pose no more than a ***minimal impact*** on the Carroll House.

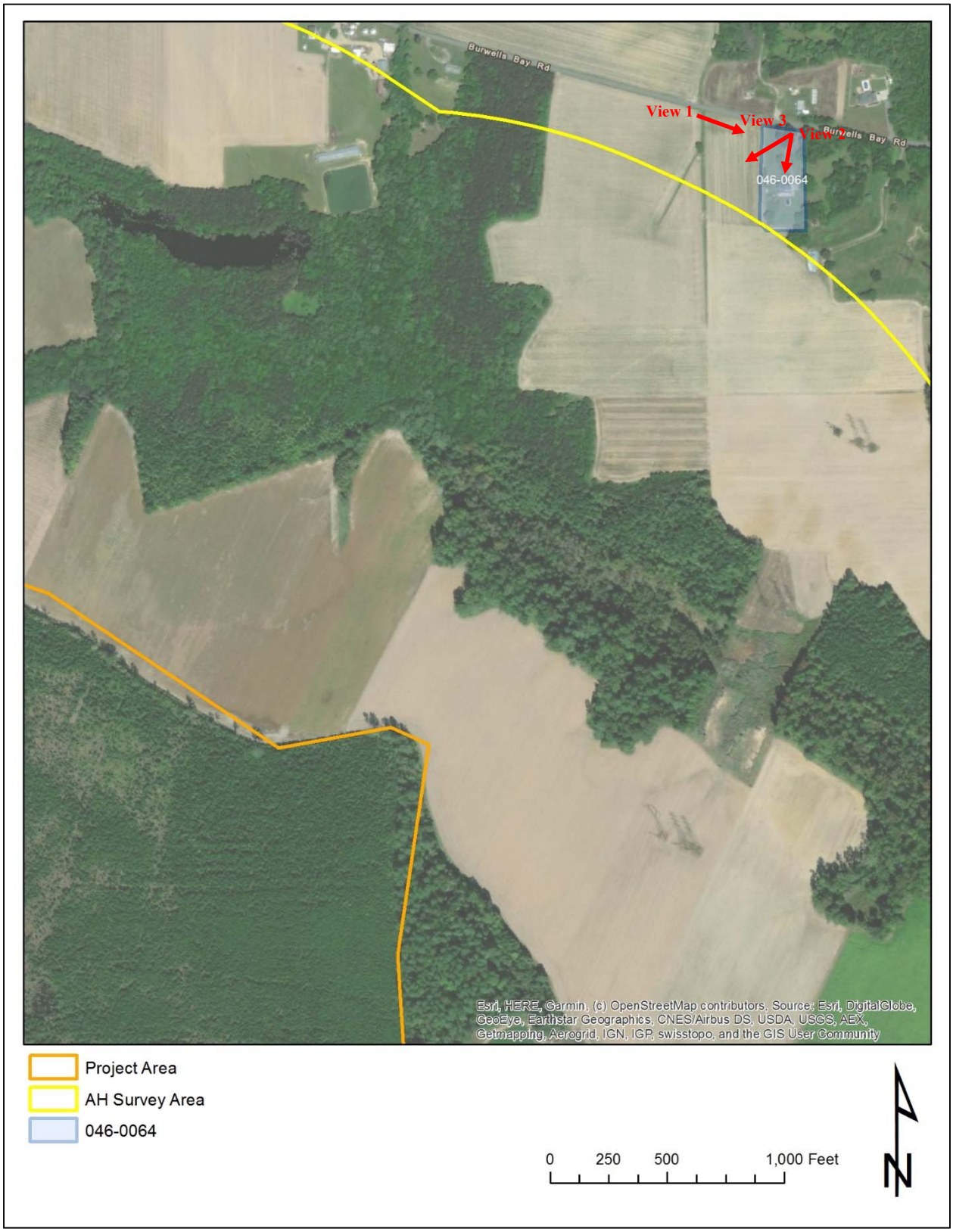


Figure 6-2: Location of Carroll House in relation to the project area showing direction of viewshed photos

Figure 6-3: View 1- View of the Carroll House Setting from Burwells Bay, facing east

Figure 6-4: View 2- View from the Carroll House front towards the project area, facing south

Figure 6-5: View 3- View from Burwells Bay Road in front of the Carroll House towards the project area, facing south

VDHR ID# 046-0065
Jones House, 9355 Burwells Bay Road

This one-and-a-half-story frame dwelling was built in 1780 according to local records and remains in good condition. The building has a double-pile, center hall plan and exhibits a Federal style. The walls are clad with clapboard and rest on a continuous brick foundation. It is topped by a side-gabled roof covered with asphalt shingles pierced by three gabled window dormers on the front slope. The building is flanked by a pair of shouldered brick chimneys on each side. The main entrance is set centrally on the front and sheltered by a one-bay gabled portico. Fenestration includes double-hung sash windows with six-over-six configurations.

This home sits on a large rural property on the west side of Burwells Bay Road just north of the intersection with Jones Road. The home sits far back from the road at the end of a gravel driveway. The homesite is grassy and shaded by a number of large trees and other vegetation and includes several historic outbuildings. Open agricultural fields surround the homesite to the front and sides. Behind the house is a wooded swampy area. A transmission line extends past the side of the house through the rear corner of the property.

This property is an example of a typical late 18th-century, Vernacular style dwelling in the region. Although it has been updated and renovated over time, it continues to retain much of its characteristic form and features. Further, the building continues to be situated at the center of a large agricultural property and retains several historic outbuildings. As such, the resource remains as a relatively intact and rare example of early plantation architecture in the region. Additional research should be conducted to more fully document the property history and development, however, at this time, the building should be considered ***potentially eligible for listing in the NRHP***.

As a ***potentially NRHP-eligible*** resource, an assessment was conducted to determine whether the project would pose any impacts to its eligibility. Improvements related to the Cavalier Solar Project

are proposed to take place within the landscape surrounding the Jones House property. One portion of the project area where improvements will take place is set immediately adjacent to the west side of the resource boundary, a second area is located immediately to the south, a third is roughly 400-feet to the east, and another is roughly 300-feet to the north (Figure 6-2 and 6-3). Between the Jones House boundary and the project improvements to the north is a wide creek and wetland area bordered by a treeline. An existing high-voltage transmission line and right-of-way also crosses the rear corner of the property and extends between it and project area.

The Jones House itself is set within a homesite complete with a manicured lawn, a variety of outbuildings, and trees and other landscaping. The home faces Burwells Bay Road to the south and the majority of outbuildings are set to the side along the western edge of the property. Trees and vegetation are scattered throughout the property with thicker lines along the sides.

To assess whether the project or any associated components may be visible from the Jones House property, a viewshed assessment was conducted. Inspection was performed and photographs taken from the public Burwells Bay Road right-of-way to document existing setting, visibility, and lines of sight (Figures 6-8 through 6-11). Inspection was not performed from the private property on which the Jones House is located, however, a review of aerial photography and topographical maps was conducted.

This assessment found that the setting around the resource is already substantially compromised by the presence of the existing transmission line. This feature is highly visible from the public road when looking towards the resource and is likely visible from the resource as well. The proposed solar panels to the north of the resource are in the direction of the rear, and the views in this direction include the existing high-voltage transmission line and right-of-way that crosses the rear corner of the property. This power line is highly visible from the public Burwells Bay Road in front of the property towards it and likely from the resource as well. Because of the distance from the public road and the presence of the transmission line and the wide tree line bordering the creek to the rear of the property, the proposed solar panels to the north will not likely be visible from public right-of-way, nor be visible from the Jones House. The proposed solar panels located to the west, south, and east of the house would likely be visible from the public road as well as the Jones House, although there is a variety of vegetation within the resource boundaries and around the house that may provide some level of screening. Additionally screening will be provided by proposed landscape buffer to be installed around the project area (Figure 6-12). Visibility from the home would further be screened by the majority of barns and associated outbuildings that are situated on the west side of the property.

As such, while the historic setting of the Jones House is already partially compromised, the improvements related to the Cavalier Solar Project have the potential to be visible and introduce additional nonhistoric characteristics. While these solar panels may be visible from discrete vantage points, visibility from both the public ROW and the property itself will be minimized by proposed landscape screening. A 125-foot landscape buffer will be installed around the edge of the property, between it and the project area; and a 75-foot landscape buffer will be planted along the road in front of the property. Additionally, the visual impact will be lessened by the fact that any visible project improvements would be seen in conjunction with the existing transmission line that dominates the landscape. Further, the project is only temporary in nature, as upon the end of the project lease, all project improvements will be removed and the site returned to its former

conditions. Still, the Cavalier Solar project is recommended to pose a *moderate impact* on the Jones House.

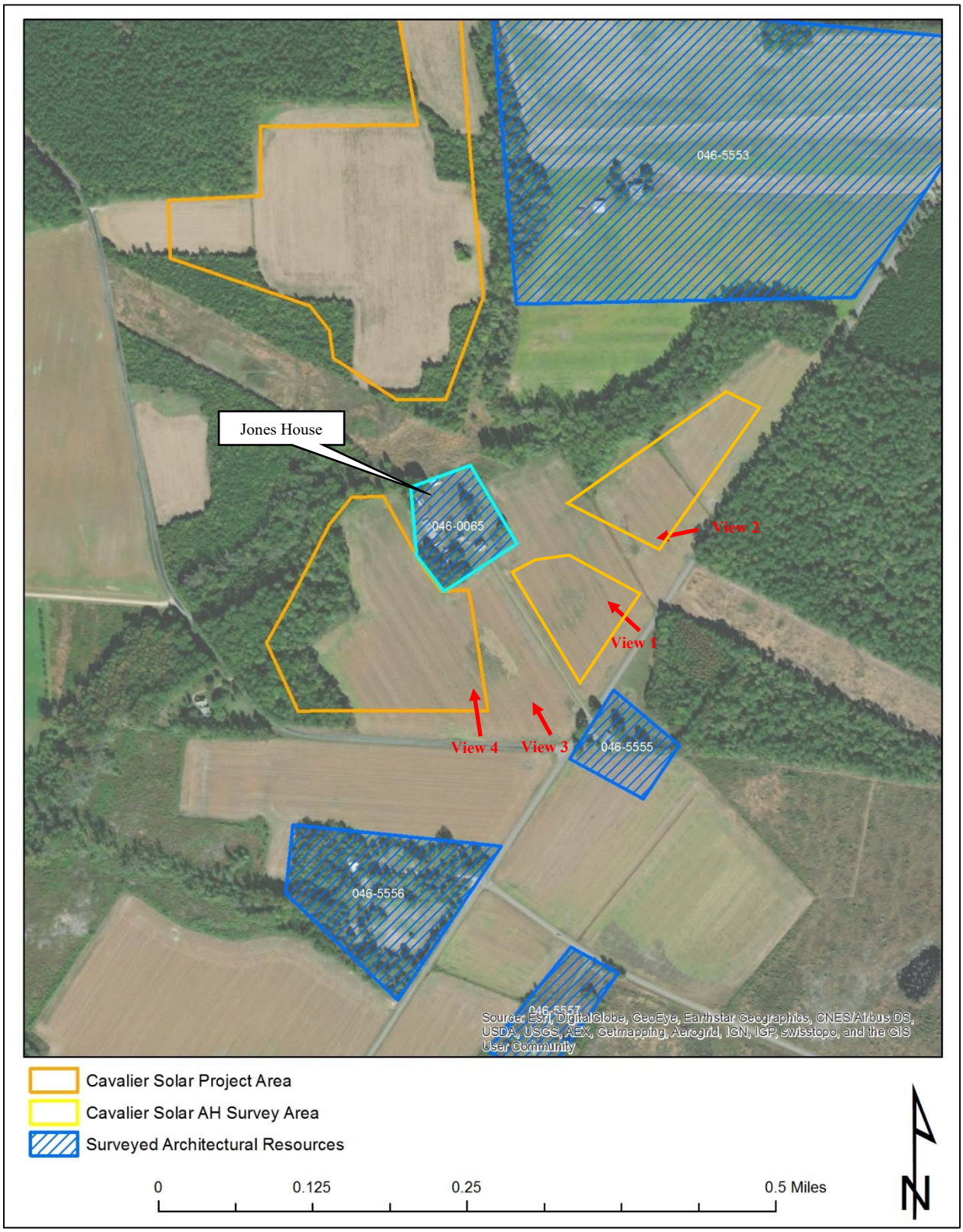


Figure 6-6: Location of Jones House in relation to the project area showing direction of viewshed photos

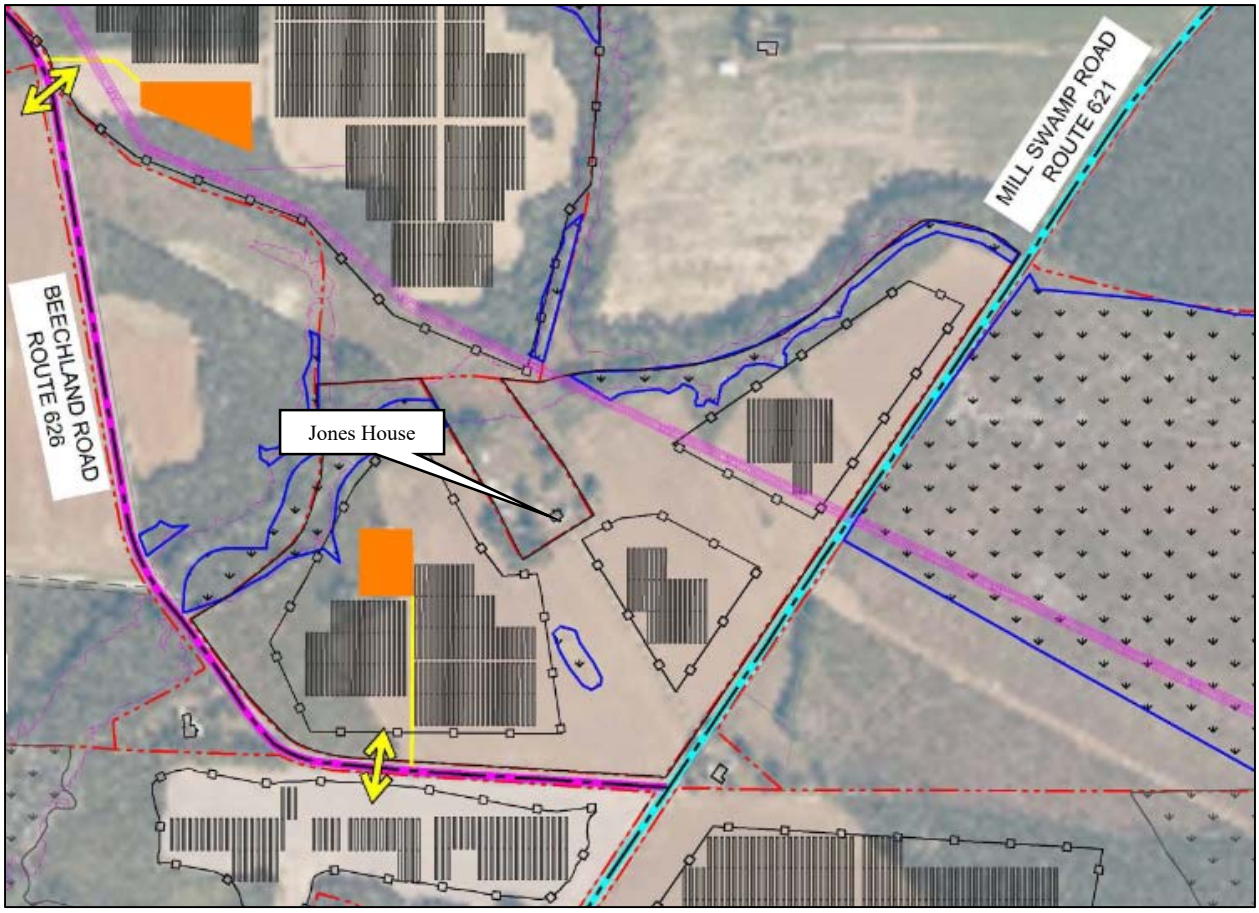


Figure 6-7: Site Plan of proposed project configuration in the vicinity of the Jones House. Source: sPower

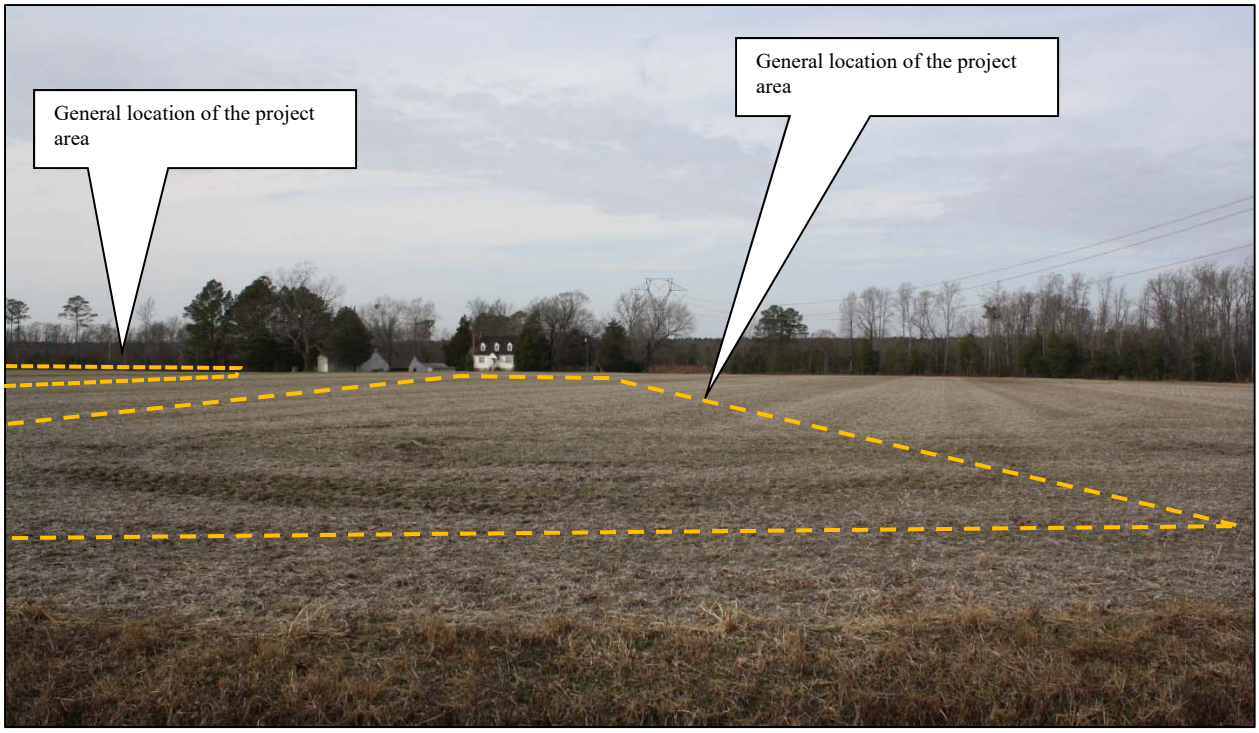


Figure 6-8: View 1- View of the Jones House Setting from Burwells Bay and Jones Road, facing west

Figure 6-9: View 2- View of the Jones House in relation to transmission line, facing west

Figure 6-10: View 3- View of the Jones House Setting from Burwells Bay and Jones Road, facing northwest

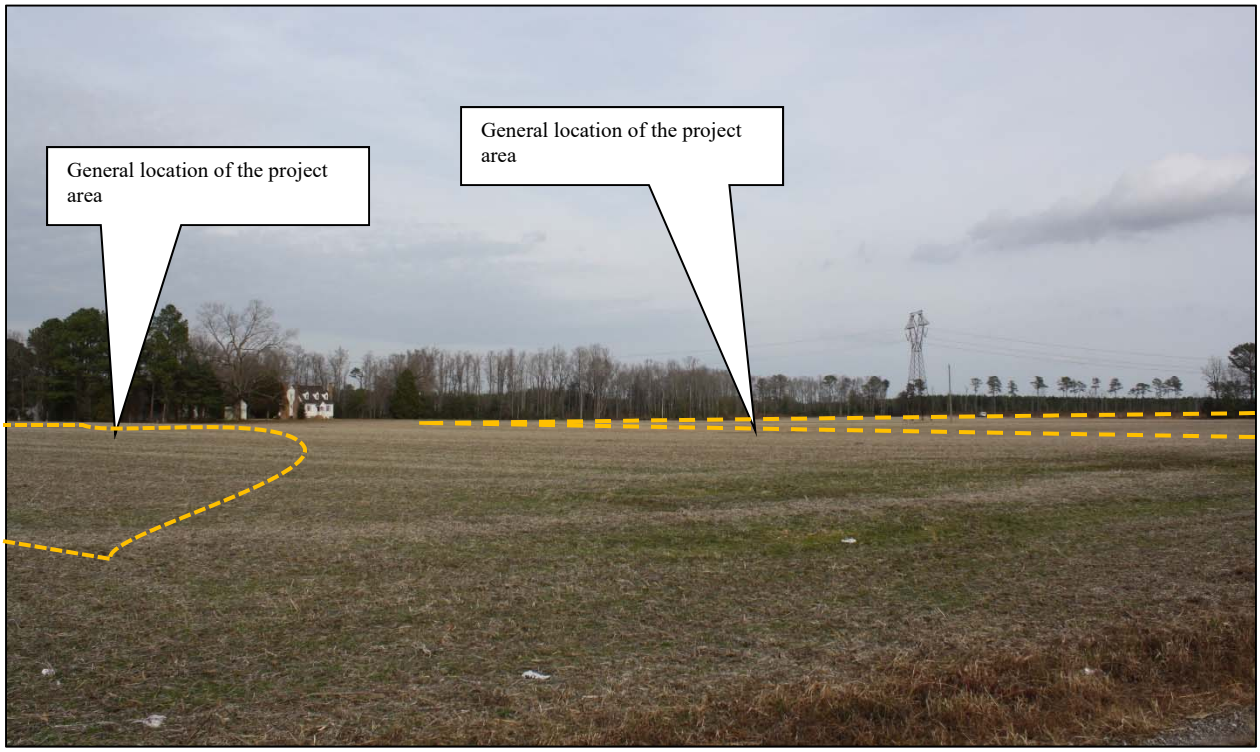


Figure 6-11: View 4- View of the Jones House Setting from Burwells Bay and Jones Road, facing north

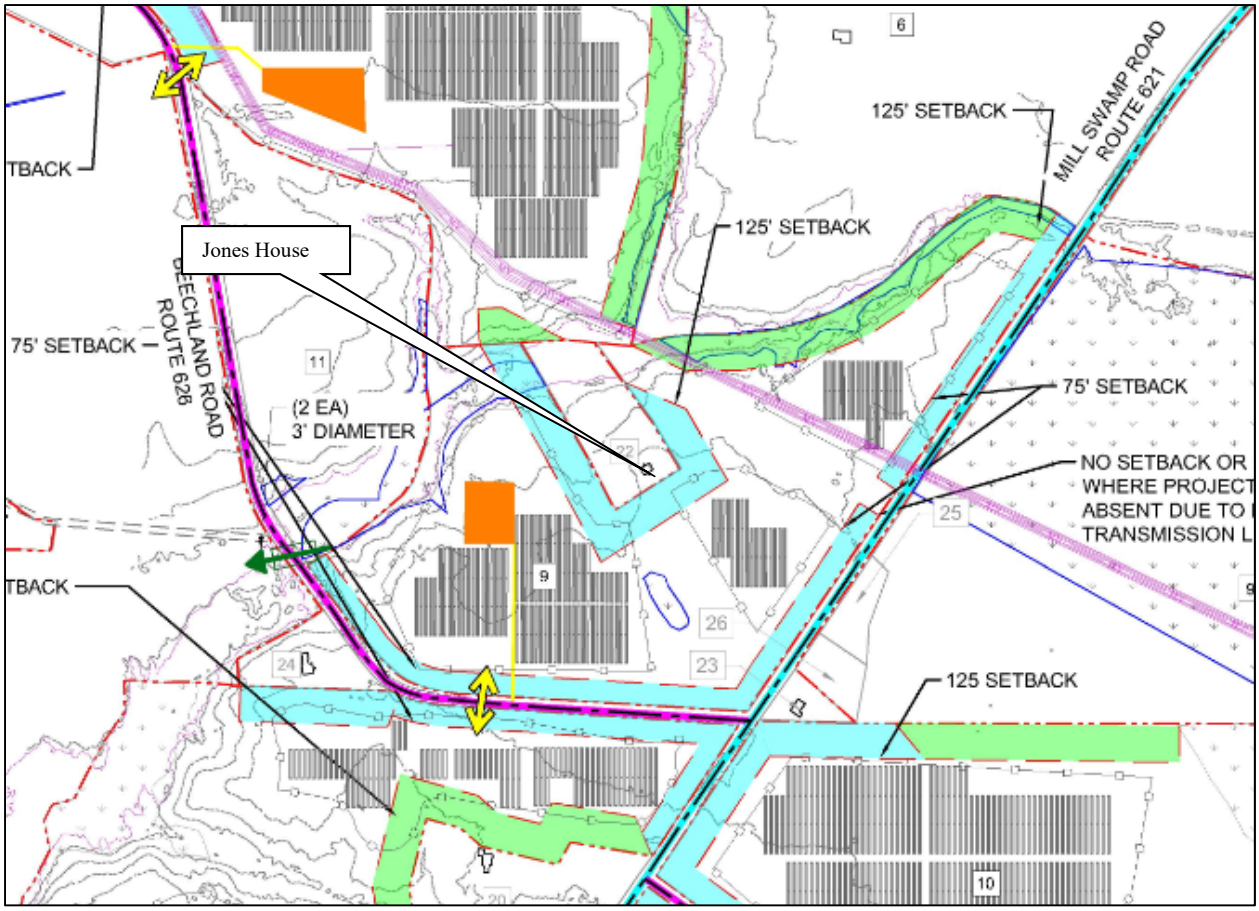


Figure 6-12: Proposed landscape buffer and screening in the vicinity of the Jones House. Source: sPower

VDHR ID# 046-0066
Gale House, 9310 Jones Drive

This one-and-a-half-story frame dwelling was built in 1798 according to local records and remains in good condition. The building has T-shaped form composed of a three-bay front block with a later rear ell and exhibits a Federal style. The walls are clad with clapboard and rest on a continuous brick foundation. It is topped by a side-gabled roof covered with asphalt shingles pierced by three gabled window dormers on the front slope. The building is flanked by a shouldered brick chimney on each side of the front block and at the end of the rear ell. The main entrance is set centrally on the front and approached by an unsheltered flight of stairs. Fenestration includes double-hung sash windows with six-over-six configurations.

This home sits on a large rural property on the south side of Jones Road just west of the intersection with Burwells Bay Road. The home sits far back from the road at the end of a gravel driveway. The home sits within a fenced homesite shaded by a number of large trees and other vegetation and includes several historic outbuildings. Surrounding the homesite to all sides are open agricultural fields. Across a field to the rear of the house is an agricultural complex with several barns and silos. Beyond those buildings is a pond and wooded swampy area. A transmission line extends through the far front corner of the property.

This property is an example of a typical late 18th-century, Vernacular style dwelling in the region. Although it has been updated and renovated over time, it continues to retain much of its characteristic form and features. Further, the building continues to be situated at the center of a large agricultural property and retains several historic outbuildings. As such, the resource remains as a relatively intact and rare example of early plantation architecture in the region. Additional research should be conducted to more fully document the property history and development, however, at this time, the building should be considered ***potentially eligible for listing in the NRHP***.

As a ***potentially NRHP-eligible*** resource, an assessment was conducted to determine whether the project would pose any impacts to its eligibility. Improvements related to the Cavalier Solar Project are proposed to take place within the landscape to the east and west of the Gale House property. These areas of project improvement are set 0.24-miles and 0.28-miles away at their nearest points (Figure 6-13 and 6-14). The landscape between the property and both portions of project area is a mix of open field, brush line, and wooded area.

The Gale House itself is set within a fenced homesite complete with a manicured lawn, a variety of outbuildings, and trees and other landscaping. The home faces Jones Road to the east and the majority of outbuildings are set to the rear. Trees and vegetation are scattered throughout the property although primarily clustered along the front edge.

To assess whether the project or any associated components may be visible from the Gale House property, a viewshed assessment was conducted. Inspection was performed and photographs taken from the public Jones Road right-of-way in front of the house to document existing setting, visibility, and lines of sight (Figures 6-15 through 6-19). Inspection was not performed from the private property on which the Gale House is located, however, a review of aerial photography and topographical maps was conducted.

This assessment found that the historic rural setting around the resource is relatively intact, however, there is an existing transmission line and right-of-way at the edge of the field to the north of the house. This feature visible from the public road when looking towards the resource and is likely visible from the resource as well. The proposed solar panels to the east (front) of the resource are to be set across the road and on the opposite side of a wide creek bordered by a treeline. This treeline and brush bordering the creek screen visibility of the field in which the solar panels will be located from Jones Road in front of the Gale House. Views from the Gale House itself would be at greater distance with additional vegetation between and would likely also be screened. Additionally, the existing transmission line is likely visible from the Gale House in this direction.

The proposed solar panels to the west (rear) are to be set within an area currently planted in timber. Views from Jones Road in this direction currently consist of open fields in front of the Gale House, with the Gale House and associated outbuildings beyond, and additional open field with the timber area further to the rear. This area of proposed solar panels would be set nearly 0.46 miles from public right-of-way and behind a thick treeline that is proposed to remain in place. As such, the solar panels are likely to be completely screened from public visibility in the vicinity of the Gale House. The Gale House is set back from the road, and thus closer to the proposed improvements, however, the associated agricultural complex and several treelines, including a thick timber area, will remain between the house and the solar panels and likely screen visibility from the house.

As such, the historic setting of the Gale House is mostly intact, but partially compromised by an existing transmission line just to the north. The improvements related to the Cavalier Solar Project will likely be screened from both public and private vantage points in the vicinity of the Gale House, and not introduce additional nonhistoric characteristics. Therefore, the Cavalier Solar project is recommended to pose no more than a *minimal impact* on the Gale House.

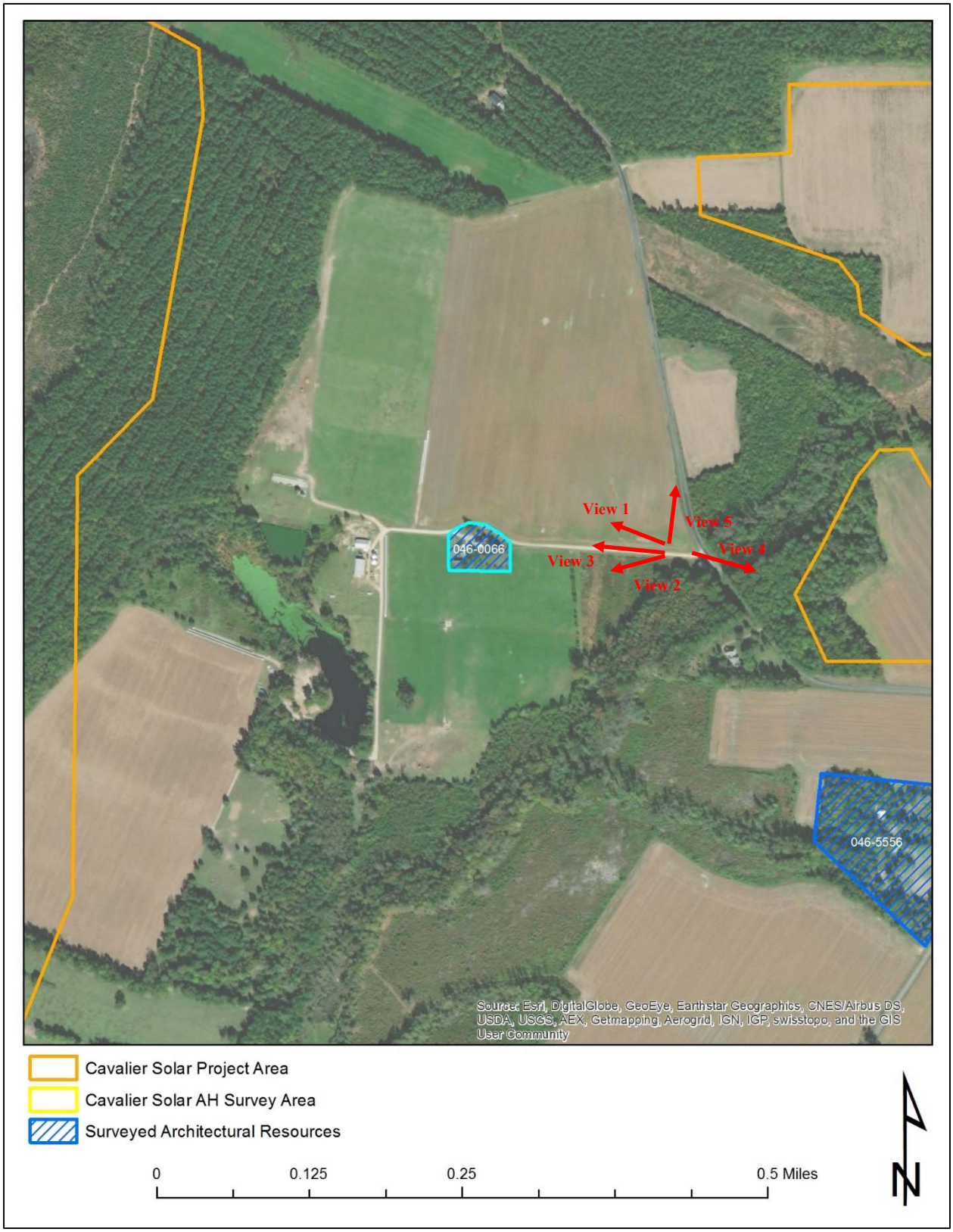


Figure 6-13: Location of Gale House in relation to the project area showing direction of viewshed photos

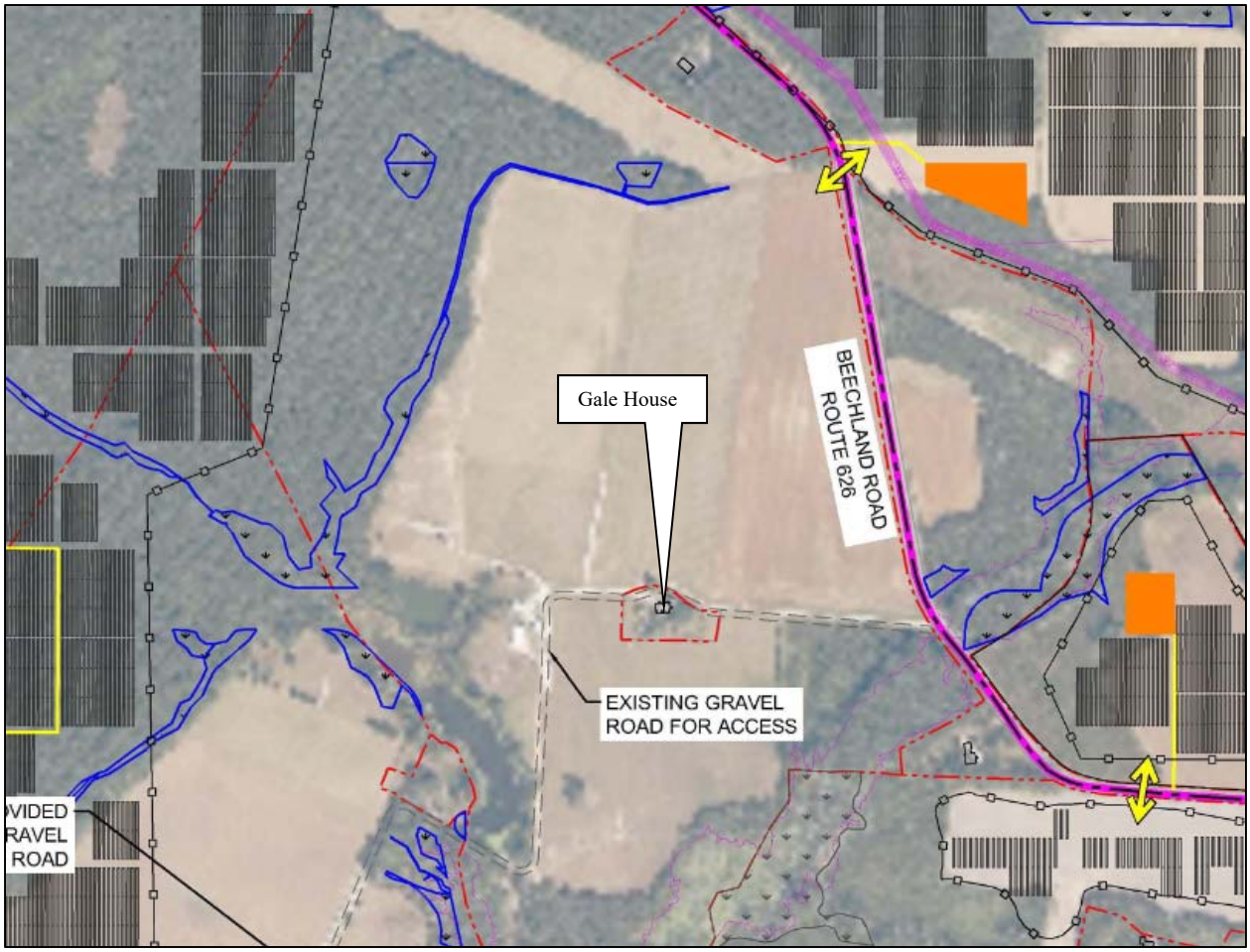


Figure 6-14: Site Plan of proposed project configuration in the vicinity of the Gale House. Source: sPower

Figure 6-15: View 1- View of the Gale House Setting from Jones Road, facing northwest

Figure 6-16: View 2- View of the Gale House Setting from Jones Road, facing west

Figure 6-17: View 3- View of the Gale House building complex from Jones Road, facing west

Figure 6-18: View 4- View of setting across Jones Road in front of Gale House , facing east

Figure 6-19: View 5- View of the Gale House Setting with transmission line, facing north

VDHR ID# 046-0069
Delk Farm, 10114 Mill Swamp Road

This two-story frame dwelling was built in 1775 according to local records and exhibits a Vernacular style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation with walls clad in weatherboard siding topped with a front gable roof covered in metal. The roof is pierced by two, exterior end and one interior slope brick chimney. The main entrance is centered on the gable-end and is sheltered by a wrap-around porch supported by square posts. Fenestration consists of single, two over two double-hung sash windows and a single, three over four double-hung sash window. Ornamentation consists of trim around the windows.

This dwelling is located on the south side of Mill Swamp Road on a large agricultural property. The property is mostly open crop fields and the homesite is accessed by a gravel driveway. There are trees spread around the dwelling. There are ten outbuildings around the main dwelling.

This property is an example of a typical late 18th-century, Vernacular style dwelling in the region. Although it has been updated and renovated over time, it continues to retain much of its characteristic form and features. Further, the building continues to be situated at the center of a large agricultural property and retains several historic outbuildings. As such, the resource remains as a relatively intact and rare example of early plantation architecture in the region. Additional research should be conducted to more fully document the property history and development, however, at this time, the building should be considered ***potentially eligible for listing in the NRHP***.

As a ***potentially NRHP-eligible*** resource, an assessment was conducted to determine whether the project would pose any impacts to its eligibility. Improvements related to the Cavalier Solar Project are proposed to take place within the landscape to the northeast of the Delk Farm property. This

area is set 0.17-miles (900-feet) away at its nearest point (Figure 6-20 and 6-21). The landscape between the property and the project area is an open field with a wooded area beyond.

The Delk Farm house itself is set within a fenced homesite complete with a variety of outbuildings, trees, and other landscaping. The home faces east and the majority of outbuildings are set to the front. Trees and vegetation are scattered throughout the property although primarily clustered around the house.

To assess whether the project or any associated components may be visible from the Delk Farm property, a viewshed assessment was conducted. Inspection was performed and photographs taken from the public Mill Swamp Road right-of-way in front of the house to document existing setting, visibility, and lines of sight (Figures 6-22 through 6-25). Inspection was not performed from the private property on which the Delk Farm is located, however, a review of aerial photography and topographical maps was conducted.

This assessment found that the historic rural setting around the resource is relatively intact. The proposed solar panels in the vicinity of the Delk Farm are to be set across the road and within an area currently planted in timber. There is to remain a buffer of timber and natural treeline bordering the road, between it and the project improvements (Figure 6-26). This treeline will likely screen visibility of the project area from public vantage along Mill Swamp Road in front of the Delk Farm. Views from the Delk Farm itself would be at greater distance and would likely also be screened.

As such, the historic setting of the Delk Farm is mostly intact, and the project area for the Cavalier Solar project is not likely to introduce any new features or characteristics into its viewshed. The improvements related to the Cavalier Solar Project will likely be screened from both public and private vantage points in the vicinity of the Delk Farm by existing vegetation bordering the road across from the property that will remain in place. Therefore, the Cavalier Solar project is recommended to pose no more than a *minimal impact* on the Delk Farm.

Figure 6-20: Location of Delk Farm in relation to the project area showing direction of viewshed photos

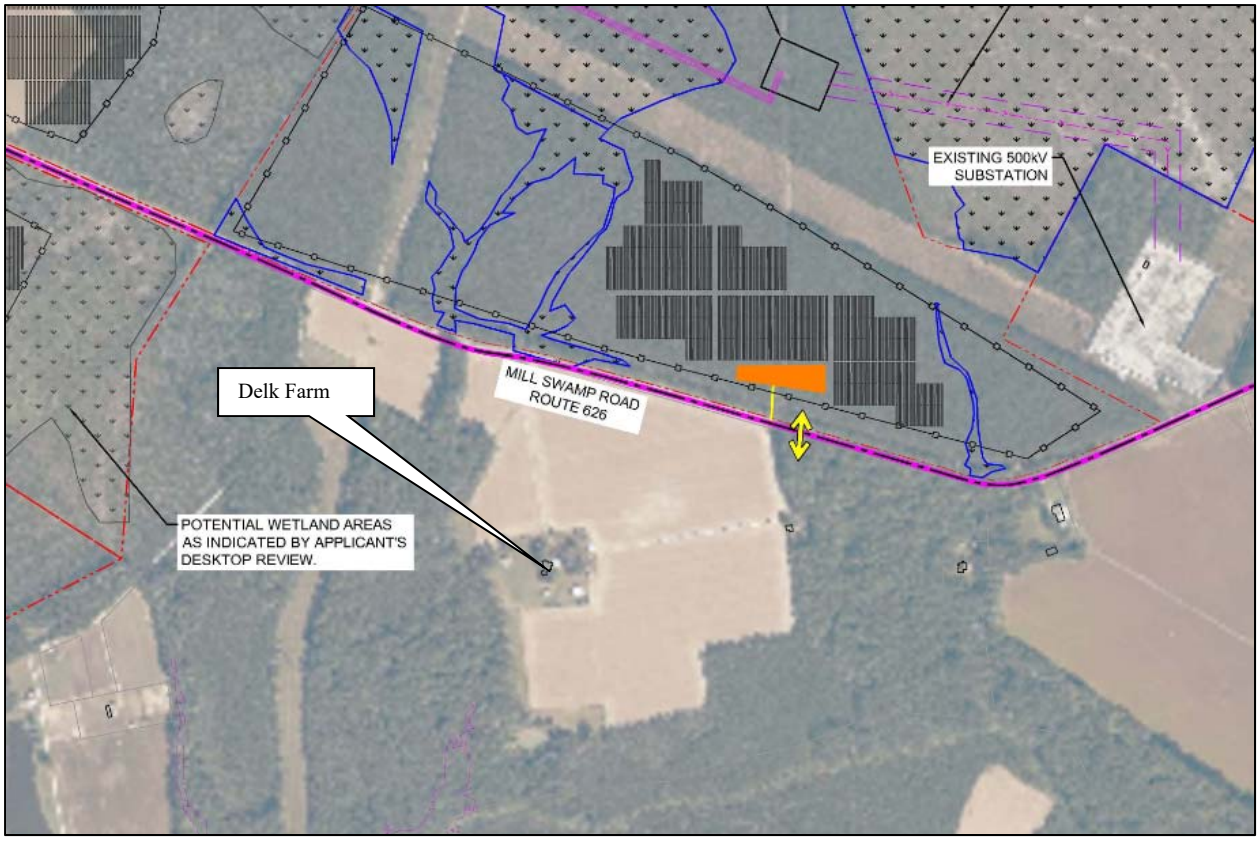


Figure 6-21: Site Plan of proposed project configuration in the vicinity of the Delk Farm. Source: sPower

Figure 6-22: View 1- View of setting along Mill Swamp Road in front of Delk Farm, facing east

Figure 6-23: View 2- View of setting across road from Delk Farm, facing northeast

Figure 6-24: View 3- View of setting between Delk Farm and project area, facing northwest

Figure 6-25: View 4- View of setting across road in front of Delk Farm, facing northwest

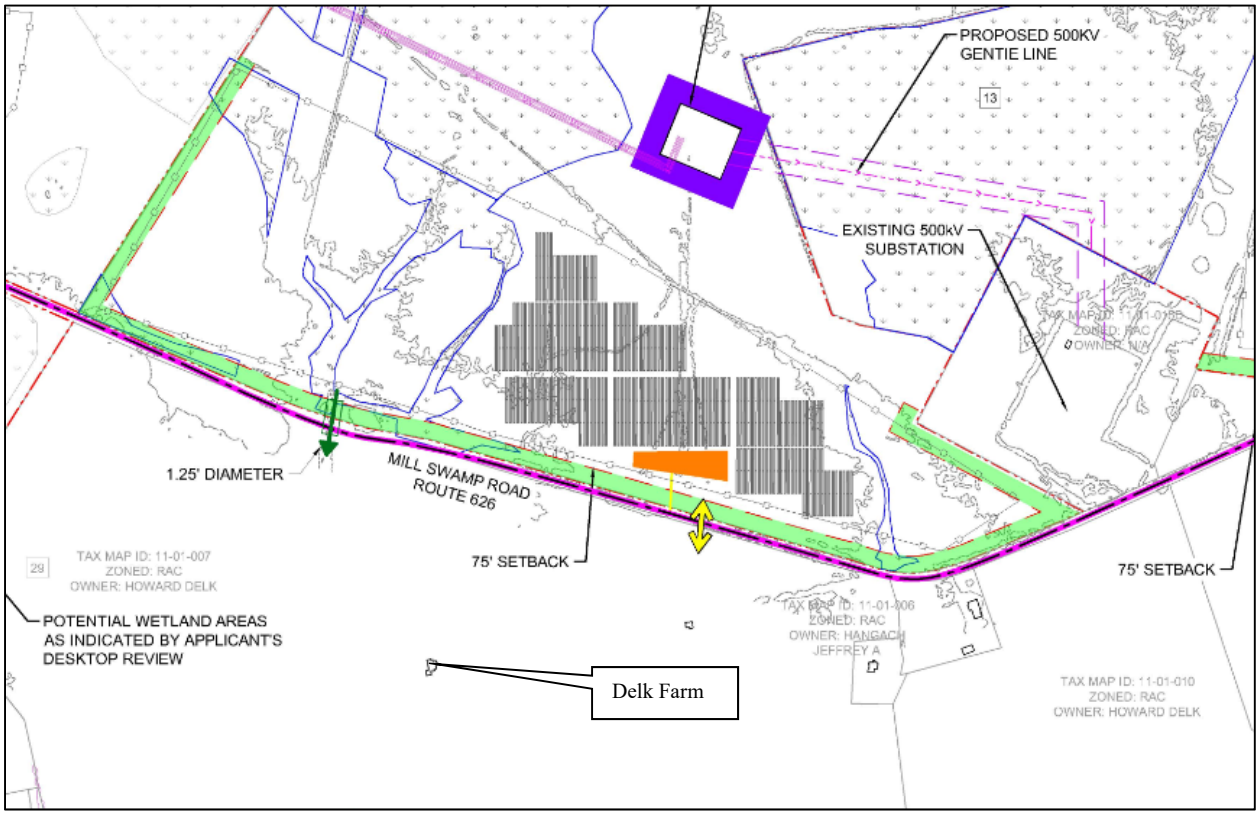


Figure 6-26: Proposed landscape buffer and screening in the vicinity of the Delk Farm. Source: sPower

VDHR ID# 046-5548
House, 10522 Burwells Bay Road

This two-story frame dwelling was built in 1900 according to local records and exhibits a Vernacular style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation with walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by an exterior end cinder block chimney and a brick chimney. The main entrance is offset on the front façade and sheltered by a full-width hipped roof porch supported by square columns. Fenestration consists of single, one over one double-hung sash windows. Ornamentation is limited to shutters on the windows.

This dwelling is located on the south side of Burwells Bay Road on a rural lot. The lot is open with agricultural fields and a pond at the rear. The dwelling is accessed by a gravel road that runs from the road to the dwelling and surrounding outbuildings. There are eight outbuildings and five silos on the lot.

This property is an undistinguished example of an early 20th-century, Vernacular dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5549
House, 7027 Mullet Drive

This single-story frame dwelling was built in 1920 according to local records and exhibits a Minimal Traditional style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in plywood panels topped with a side gable roof covered in asphalt shingles. The roof is pierced by a central interior cinder block chimney. The main entrance is slightly offset on the front façade and is unsheltered. Fenestration consists of single, two over two double-hung sash windows. The dwelling lacks any major ornamentation.

This dwelling is located on the north side of Mullet Drive on a rural residential lot. The lot is heavily overgrown and what was likely once a yard has now been filled in with small saplings. The area surrounding the dwelling is wooded and no outbuildings are associated with this property.

This property is an undistinguished example of an early 20th-century, Minimal Traditional dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5550
House, 10126 White Hill Trail

This two-story frame dwelling was built in 1890 according to local records and exhibits a Vernacular style. It has an L-shaped form and remains in fair condition. The dwelling rests on a continuous foundation with walls clad in vinyl siding topped with a cross gable roof covered in corrugated metal. The roof is pierced by two exterior-end brick chimneys. The main entrance is centered on the front façade and is sheltered by a single-story, full-width, screened-in porch supported by turned wood posts. Fenestration consists of single, six over six double-hung sash windows. Ornamentation is limited to shutters on the windows and the turned posts.

This dwelling is located on a rural lot that is mostly open crop fields. There are wooded areas on the edges of the property and a pond on the adjacent lot. A shared gravel driveway leads to the front of the dwelling and wraps around to the rear where four outbuildings are located.

This property is an undistinguished example of a 19th-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5551
House, 10106 White Hill Trail

This single-story frame dwelling was built in 1944 according to local records and exhibits a Minimal Traditional style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by a central interior brick chimney. The main entrance is offset on the south-end of the front façade and is sheltered by an enclosed screen porch. Fenestration consists of single, six over six double-hung sash windows. Ornamentation is limited to shutters on the windows.

This dwelling is located on the west side of White Hill Trail on a small rural residential lot. The lot contains trees spread throughout with open grassy areas surrounding the homesite. A gravel driveway loops around the dwelling and gives access to a carport and two outbuildings.

This property is an undistinguished example of a mid-century, Minimal Traditional style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5552
House, 10088 White Hill Trail

This single-story frame dwelling was built circa 1930 according to site survey and exhibits a Vernacular style. It has a rectangular form and remains in poor condition. The dwelling rests on pier foundation and has walls clad in weatherboard siding topped with a side gable roof covered in corrugated metal. The roof is pierced by two central interior brick chimneys. The main entrance is slightly offset on the front façade and is sheltered by a shed roof portico supported by wood posts. Fenestration consists of single, six over six double-hung sash windows. The dwelling lacks any major ornamentation.

This dwelling is located on the west side of White Hill Trail on a small rural residential lot. The lot is on a slightly higher grade than the road and trees are spread throughout the property. There were no outbuildings observed during the survey.

This property is an undistinguished example of an early 20th-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5553
House, 9621 Burwells Bay Road

This two-story frame dwelling was built in 1933 according to local records and exhibits a Folk Victorian style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation with walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by two interior brick chimneys. The main entrance is slightly offset on the front façade and sheltered by a partial-width screen porch. Fenestration on the first and second-floor consists of single, six over six double-hung sash windows. Ornamentation includes shutters on the windows and cornice returns on the front gable-end.

This dwelling is located on the west side of Burwells Bay Road on a rural lot. The homesite is situated centrally on the lot and is surrounded by crop fields and a wooded area at the rear. It is accessed by a long gravel driveway and trees surround the dwelling. There are two sheds behind the dwelling and a garage on the southwest side. A collapse outbuilding is located behind the garage.

This property is an undistinguished example of an early 20th-century, Folk Victorian style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5554
House, 10338 Burwells Bay Road

This single-story frame dwelling was built in 1940 according to local records and exhibits a Minimal Traditional style. It has rectangular form and remains in fair condition. The dwelling rests on a pier foundation with walls clad in asbestos siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by an interior cinder block chimney. The main entrance is centered on the front façade and is unsheltered. Fenestration consists of single, six over six double-hung sash windows. The dwelling lacks any ornamentation.

This dwelling is located on the east side of Burwells Bay Road on a rural lot. The dwelling is surrounded by trees and is grown up. A crop field is located to the south and no outbuildings were observed during the survey.

This property is an undistinguished example of a mid-century, Minimal Traditional style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5555
House, 9352 Burwells Bay Road

This single-story frame dwelling was built in 1957 according to local records and exhibits a Ranch style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by a central interior brick chimney. The main entrance is centered on the front façade and unsheltered. Fenestration consists of single and paired, one over one double-hung sash windows. A picture window with a central single-pane fixed window flanked on either side by a two over two double-hung sash window is located on the north end of the front façade. A secondary-entrance is located on the south-end of the front façade. The dwelling is ornamented with shutters on the windows.

This dwelling is located on the east side of the intersection of Burwells Bay Road and Jones Drive on a small rural residential lot. The lot is open and grassy with trees spread throughout. A gravel driveway leads to the front of the dwelling and a shed is located in the rear.

This property is an undistinguished example of a mid-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5556
House, 9527 Mill Swamp Road

This two-story frame dwelling was built in 1927 according to local records and exhibits a Folk Victorian style. It has a T-shaped form composed of a gable and wing and remains in good condition. The dwelling rests on a continuous foundation and the walls are clad with clapboard. It is topped by a cross-gable roof covered with standing seam metal. The roof is pierced by an interior brick chimney on the ridge of the side wing and a second exterior chimney extends up the side of the main block at the ridge. The main entrance is set on the main block and sheltered by a full-width shed porch. Fenestration consists of double-hung sash windows.

This building is set on the west side of Mill Swamp Road on a larger rural property. It is set back from the road at the end of a long gravel driveway. It sits within a heavily vegetated homesite that partially obscures the building from the road. Several historic outbuildings are set around the house within the wooded area. Surrounding the wooded building complex are large, open agricultural fields.

This property is an undistinguished example of a typical turn-of-the-twentieth century, folk style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5557
House, 9580 Mill Swamp Road

This single-story frame dwelling was built in 1900 according to local records and exhibits a Vernacular style. It has a rectangular form, remains in poor condition, and appears to be abandoned. The dwelling rests on a continuous foundation and has walls clad in aluminum siding topped with a cross gable roof covered in corrugated metal. The roof is pierce by two, central interior brick chimneys. The main entrance is centered on the front façade and is sheltered by a front gable portico supported by tapered square columns. Fenestration consists of paired, one over one double-hung sash windows. The dwelling is ornamented with shutters on the windows.

This dwelling is located on the south side of Mill Swamp Road on a rural lot. The lot appears to have been abandoned and is severely overgrown; what appears to have once been open grassy area is now shrubs and bushes. A driveway leads to the front of the dwelling and there appears to be two outbuildings only visible from aerial photography.

This property is an undistinguished example of an early 20th-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5558
House, 8396 James Wilson Way

This two-story frame dwelling was built in 1898 according to local records and exhibits a Vernacular style. It has a rectangular I-house form with a one-story rear ell and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in weatherboard siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by two, exterior end brick chimneys. The main entrance is centered on the front façade and sheltered by a full-width single-story porch supported by wood posts. Fenestration consists of single, six over six double-hung sash windows. The dwelling lacks any major ornamentation.

This dwelling is located at the end of James Wilson Way on a rural property. The lot is accessed by a gravel driveway that loops around the homesite and is accessed from two points on James Wilson Way. There are three outbuildings on the property only visible from aerial photography. The homesite is surrounded by wooded forest on the east side and agricultural fields to the west.

This property is an undistinguished example of a late 19th-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5559
House, 8424 James Wilson Way

This single-story frame dwelling was built in 1959 according to local records and exhibits a Ranch style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation with walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. There are no chimneys present. The main entrance is offset on the front façade and is sheltered by a partial width enclosed porch. Fenestration consists of a ribbon of one over one double-hung sash windows and single and double, six over six double-hung sash windows. The dwelling lacks any major ornamentation.

This dwelling is located on the west side of James Wilson Way on a small rural residential lot. There are trees along the road frontage and perimeter of the property. It is accessed by a gravel driveway. There is a carport and three sheds located on the property.

This property is an undistinguished example of a mid-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5560
House, 10382 Mill Swamp Road

This two-story frame dwelling was built in 1935 according to local records and exhibits a Vernacular style. It has a rectangular form and remains in good condition. The dwelling rests on a continous foundation and has walls clad in aluminum siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by central interior brick chimney. The main entrance is centered on the front façade and sheltered by a full-width single-story porch supported by square columns. Fenestration consists of single, two over two double-hung sash windows. Ornamentation consists of shutters on the windows and a transom light above the main entrance.

This dwelling is lcoated on the south side of Mill Swamp Road on a rural property. The homesite contains trees throughout and a wooded area to the west. The area to the east of the homesite is open crop fields. A gravel driveway leads to the west side of the dwelling to a pool in the rear. A shed is located at the rear of the property.

This property is an undistinguished example of an early 20th-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5561
House, 11050 Mill Swamp Road

This two-story frame dwelling was built in 1862 according to local records and exhibits a Folk Victorian style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by two, exterior-end brick chimneys. The main entrance is centered on the front façade and sheltered by a full-width porch supported by turned wood posts. Fenestration consists of single and paired, six over six double-hung sash windows. Ornamentation consists of shutters on the windows, post-face brackets on the porch, and a divided transom light above the main entrance.

This dwelling is located on the south side of Mill Swamp Road on a rural lot. Most of the property is open crop fields with a pond in front of the homesite and woods along the east side. A gravel driveway leads to the homesite and is lined with trees. There are four outbuildings located in the homesite.

This property is an undistinguished example of a mid-19th-century, Folk Victorian style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5562
House, 11100 Mill Swamp Road

This single-story frame dwelling was built in 1956 according to local records and exhibits a Minimal Traditional style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation with walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by a central interior cinder block chimney. The main entrance is centered on the front façade and is sheltered by a metal awning. Fenestration consists of single and paired, one over one double-hung sash windows. Ornamentation is limited to shutters on the windows.

This dwelling is located on the south side of Mill Swamp Road on a small rural residential lot. The lot is heavily wooded and the front yard is fenced in by a metal chain link fence. A driveway leads around the dwelling to a carport at the rear.

This property is an undistinguished example of a mid-century, Minimal Traditional style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5563
House, 11128 Mill Swamp Road

This one and a half story frame dwelling was built in 1941 according to local records and exhibits a Vernacular style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in aluminum siding topped with a side gable roof covered in corrugated metal. The roof is pierced by an exterior end brick chimney. The main entrance is centered on the front façade and is sheltered by a full-width porch supported by wood posts. Fenestration consists of single and paired, six over six double-hung sash windows. Ornamentation is limited to shutters on the windows.

This dwelling is located on the south side of Mill Swamp Road on a small rural lot. The lot is overgrown with trees spread throughout and wooded area to the west. A driveway leads to the east side of the dwelling and no outbuildings were observed during the survey.

This property is an undistinguished example of a mid-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5564
House, 11292 Mill Swamp Road

This single-story frame dwelling was built in 1951 according to local records and exhibits a Minimal Traditional style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in asbestos siding topped with a side gable roof with lower central cross gable. The roof is covered in asphalt shingles and pierced by a central interior cinder block chimney. The main entrance is slightly offset on the front façade and sheltered by a front gable portico supported by turned wood posts. Fenestration consists of paired, six over six double-hung sash windows and a picture window. The picture window consists of a central, twelve-light fixed window flanked on either side by a six over six double-hung sash window. The dwelling lacks any ornamentation outside of a wide cornice board and trim around the fenestration.

This dwelling is located on the south side of Mill Swamp Road on a small rural lot. The lot is slightly above grade from the road and is on a slight slope. It is wooded with trees spread throughout and a gravel driveway leading to the east side of the dwelling. A pre-fabricated shed is located behind the dwelling.

This property is an undistinguished example of a mid-century, Minimal Traditional style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5565
House, 11301 Mill Swamp Road

This single-story frame dwelling was built in 1949 according to local records and exhibits a Ranch style. It has a rectangular form and remains in fair condition. The dwelling rests on a contionus foundation and has walls clad in vinyl siding topped with a side gable roof with a series of smaller front gables. The roof is covered in asphalt shingles and is pierced by a central interior brick chimney. The main entrance is offset on the front façade and is sheltered by an overhand supported by a decorative metal post. Fenestration consists of a varitey of window types. There are single and paired, six over six double-hung sash windows on the west-end of the front façade and a secondary-entrance that is unsheltered. A bay window is centrally located and on the east-end are single, eight over eight double-hung sash windows. Ornamentation is limited to shutters on the windows.

This dwelling is located on the north side of Mill Swamp Road on a small rural residential lot. The lot is slightly slopped and is at a higher grade than the road. It is wooded with trees spread throughout and bushes along the front façade of the dwelling. A gravel driveway leads to the east side of the dwelling and an outbuilding is located at the rear of the lot.

This property is an undistinguished example of a mid-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5566
House, 11231 Mill Swamp Road

This two-story frame dwelling was built in 1790 according to local records and exhibits a Vernacular style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding. The roof is a cross gable shape covered in corrugated metal and pierced by two, exterior end brick chimneys. The main entrance is centered on the front façade and sheltered by a full-width porch supported by tapered square columns set on brick piers. Fenestration consists of single, nine over six double-hung sash windows on the first-floor and single, six over six double-hung sash windows on the second-floor. Ornamentation consists of shutters on the windows.

This dwelling is located on the north side of Mill Swamp Road on a rural lot that is used for agricultural purposes. The dwelling sits along the road frontage and contains a few trees surrounding it. The rest of the lot is open agricultural fields being accessed by a gravel road. There are ten outbuildings and seven silos located along the road behind the main dwelling.

This property is an example of a typical late 18th-century, Vernacular style dwelling in the region. Although it has been updated and renovated over time, it continues to retain much of its characteristic form and features. Further, the building continues to be situated at the center of a large agricultural property and retains several historic outbuildings. As such, the resource remains as a relatively intact and rare example of early plantation architecture in the region. Additional research should be conducted to more fully document the property history and development, however, at this time, the building should be treated as ***potentially eligible for listing in the NRHP***.

As a ***potentially NRHP-eligible*** resource, an assessment was conducted to determine whether the project would pose any impacts to its eligibility. Improvements related to the Cavalier Solar Project are proposed to take place within the landscape to the west of the property at 11231 Mill Swamp Road (Figure 6-27 and 6-28). While the associated agricultural fields are set in closer proximity to

the project area, the house itself roughly 0.35-miles away. Set across the associated agricultural fields in the direction of the project area, and between it and the house is a twentieth century farm property consisting of a home and a large complex of outbuildings.

The house at 11231 Mill Swamp Road itself is set adjacent to Mill Swamp Road with a large complex of twentieth century barns and outbuildings immediately to the rear. It rests within a small grassy yard bordered by the road to the front, a farm lane to the west, agricultural complex to the rear, and another residential property to the east. The homesite is bordered by agricultural fields to the rear and west side, and a swampy wooded area to the east. Across the agricultural fields to the west, in the direction of the project area, is an existing high-voltage transmission line corridor that ties into an existing substation complex just down the road.

To assess whether the project or any associated components may be visible from the property at 11231 Mill Swamp Road, a viewshed assessment was conducted. Inspection was performed and photographs taken from the public Mill Swamp Road right-of-way to document existing setting, visibility, and lines of sight (Figures 6-29 through 6-32). Inspection was not performed from the private property on which the house is located, however, the house is near the road and thus shares similar views as from the public ROW.

This assessment found that the historic setting around the resource remains rural, however, is already partially compromised by the presence of an existing transmission line and substation to the west. This feature is highly visible from the public road when looking from the resource in the direction of the project area. The proposed solar panels to the west of the resource are to its side, and the views in this direction are of agricultural field, the adjacent twentieth century farm, and the existing high-voltage transmission line. The project area and proposed improvements would be located beneath and beyond the transmission line in a field that is partially visible. However, a treeline at the bend in Mill Swamp Road and the adjacent farm complex limit visibility of the project area to a narrow window. That vista is partially screened by a narrow line of trees bordering the driveway to the farm complex. Visibility would be further screened by a line of landscape buffer to be planted along the east edge of the project area (Figure 6-33).

As such, the historic setting of the House at 11231 Mill Swamp Road is already partially compromised by an existing transmission line in the direction of the project area and is further interrupted by large complexes of twentieth century agricultural buildings immediately to the rear and on the adjacent property. For these reasons, the primary significance of the resource is derived from its architecture and setting should be considered of less significance. Still, the project has the potential to introduce additional nonhistoric or compatible features into the setting around the resource, but visibility will be minimized by existing and proposed vegetative screening. Therefore, the Cavalier Solar Project is recommended to pose no more than a *minimal impact* on the house at 11231 Mill Swamp Road.

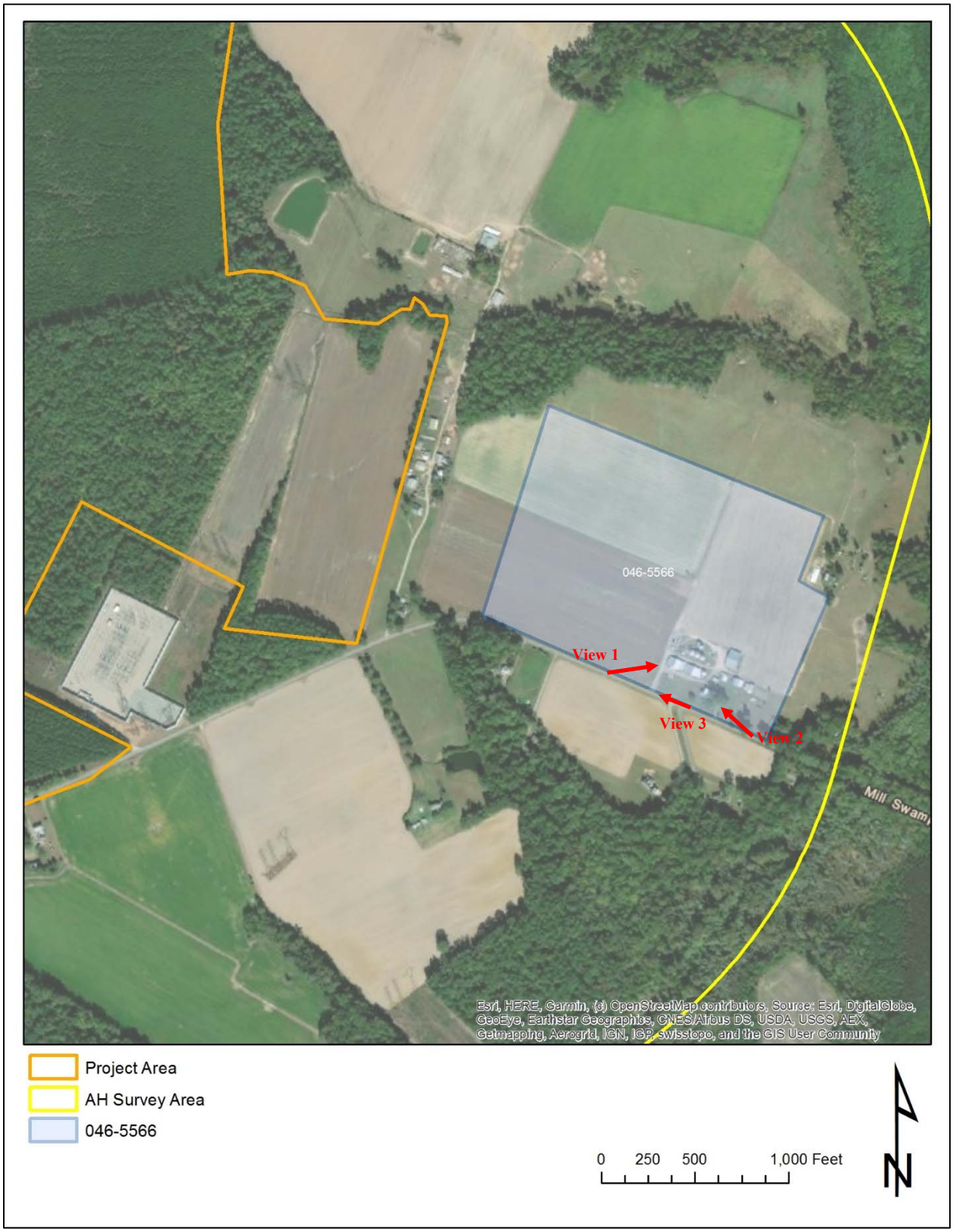


Figure 6-27: Location of 11231 Mill Swamp Road in relation to the project area showing direction of viewshed photos

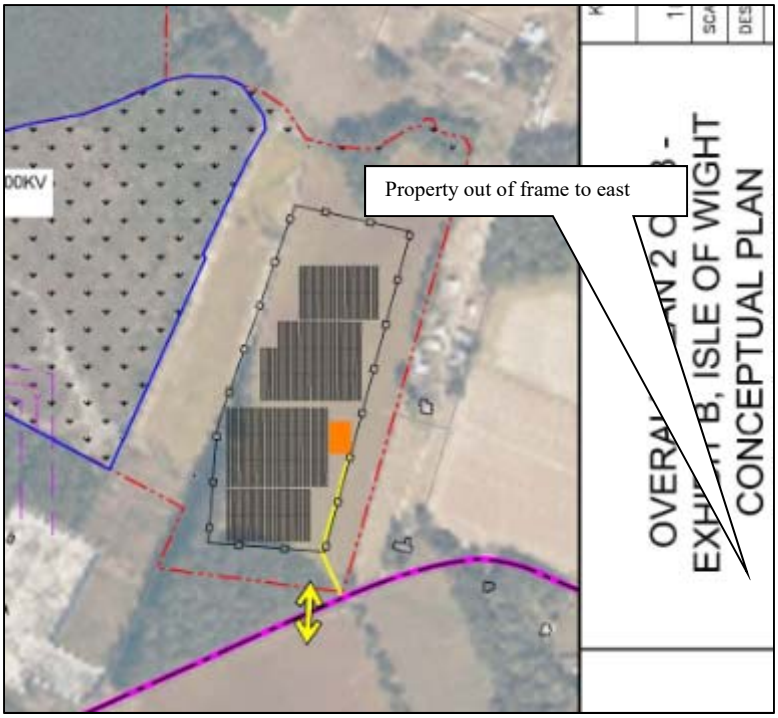


Figure 6-28: Site Plan of proposed project configuration in the vicinity of the property at 11231 Mill Swamp Road. Source: sPower

Figure 6-29: View 1- View of the 11231 Mill Swamp Road Setting, facing east

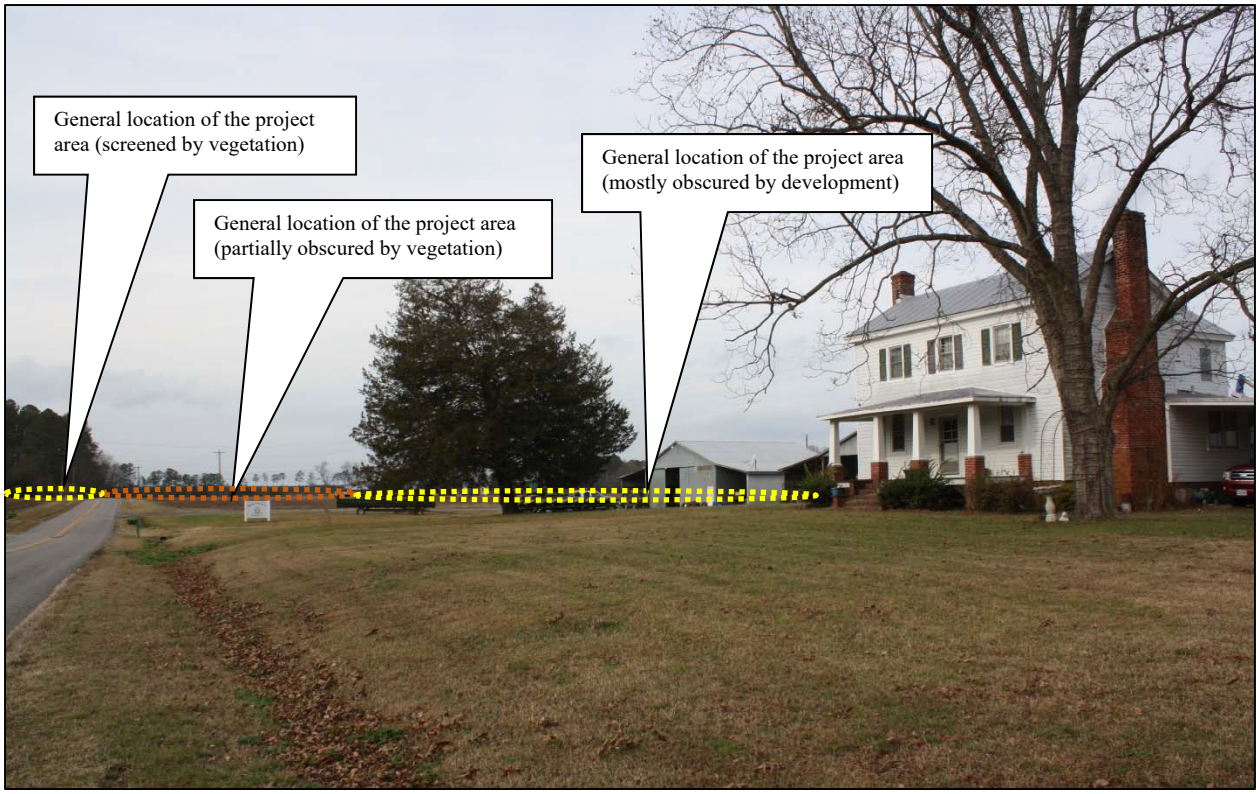


Figure 6-30: View 2- View from 11231 Mill Swamp Road towards project area, facing west

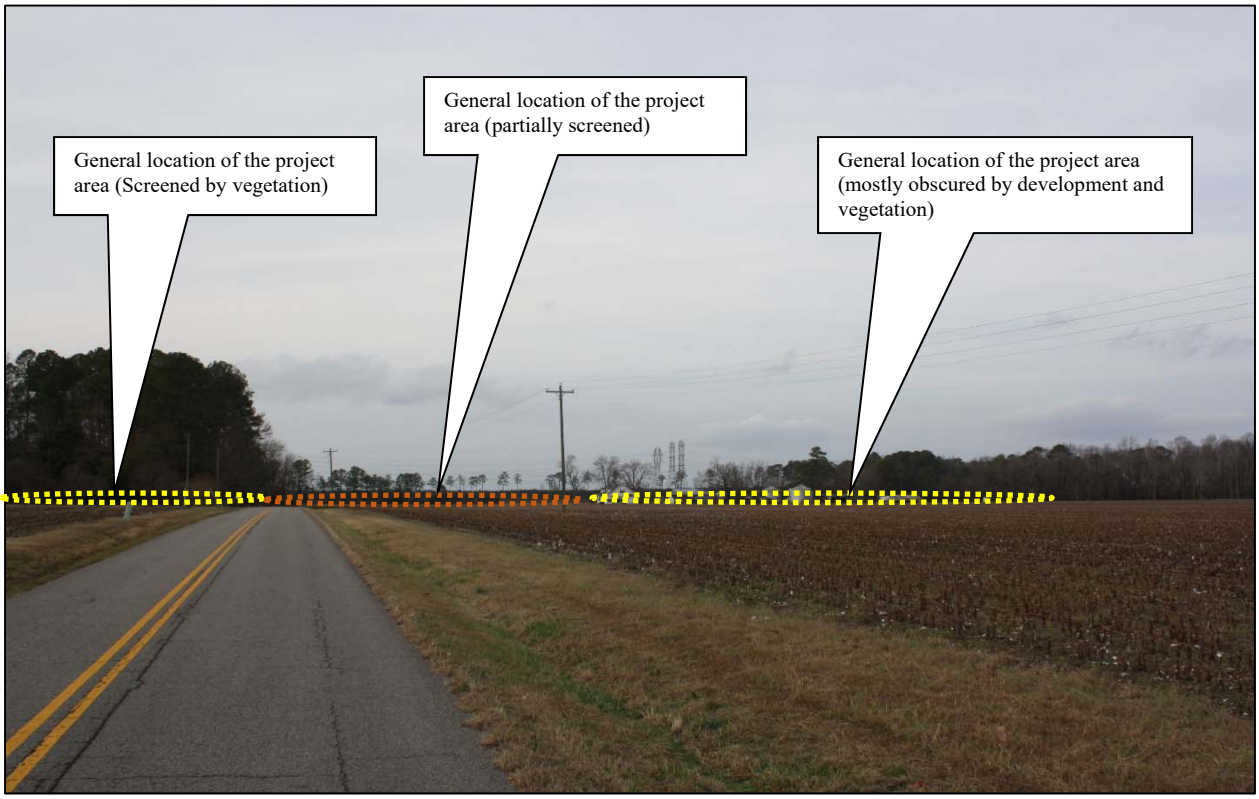


Figure 6-31: View 3- View from the 11231 Mill Swamp Road property towards the project area, facing west

Figure 6-32: View 4- Detail of view from 11231 Mill Swamp Road towards the project area, facing west

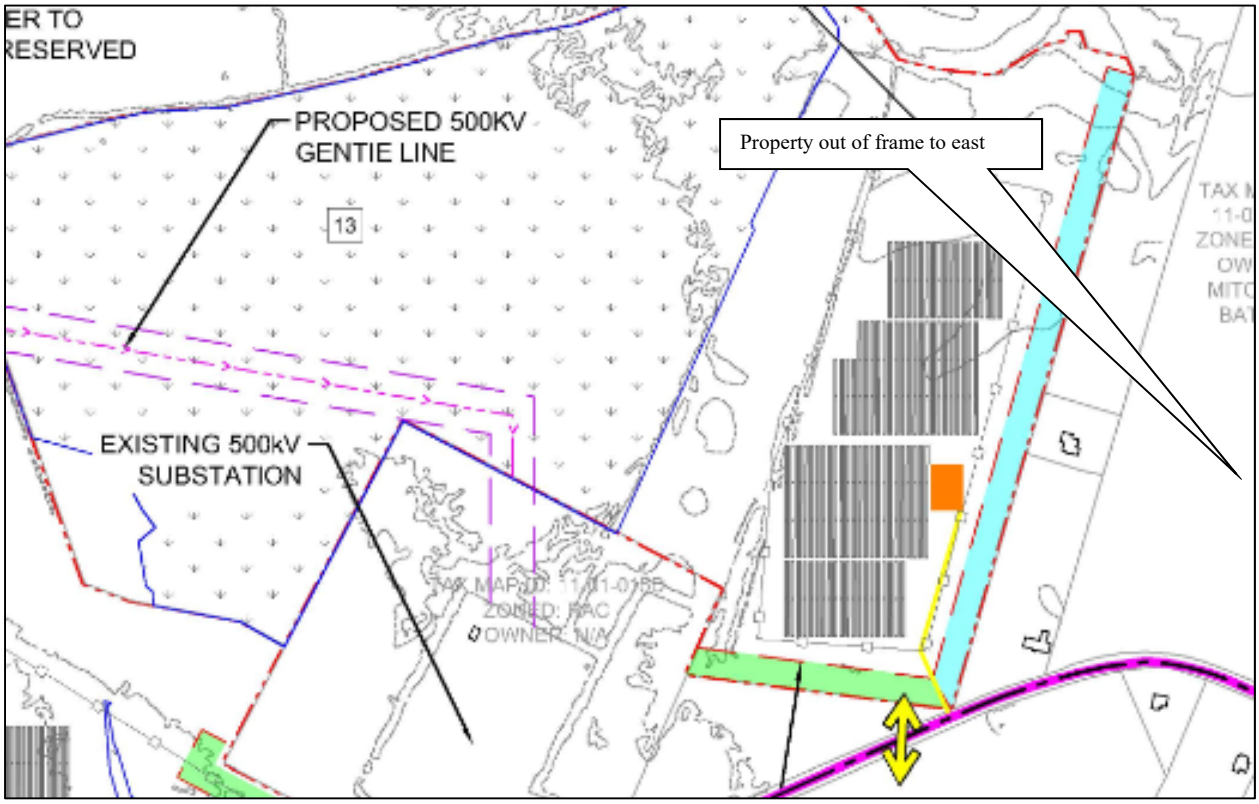


Figure 6-33: Proposed landscape buffer and screening in the vicinity of the property at 11231 Mill Swamp Road. Source: sPower

VDHR ID# 046-5567
House, 11063 Mill Swamp Road

This single-story frame dwelling was built in 1936 according to local records and exhibits a Ranch style. It has an L-shaped form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by a central interior brick chimney. The main entrance is centered on the front façade and sheltered by a front gable portico supported by square columns. Fenestration consists of single, six over six double-hung sash windows and single, eight over eight double-hung sash windows. A carport extends off the east elevation and is supported by tapered columns set on brick piers. Ornamentation is limited to shutters on the windows.

This dwelling is located on the north side of Mill Swamp Road on a small rural residential lot. The front yard is open and grassy with trees along the perimeter and bushes along the front façade. A shared driveway runs along the west side of the dwelling with brick piers located on either side along the road frontage. An outbuilding not visible from the public right of way, but is visible on aerial photography is located behind the main dwelling.

This property is an undistinguished example of an early 20th-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5568
House, 11073 Mill Swamp Road

This one and a half story frame dwelling was built in 1950 according to local records and exhibits a Colonial Revival style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by two interior slope brick chimneys and two, gabled dormers. Each dormer contains a single, six over six double-hung sash window. The main entrance is centered on the front façade and is sheltered by a front gable portico supported by wood brackets. The doorway has divided sidelights on either side. Fenestration consists of single, six over six double-hung sash windows. A screen porch extends off the east elevation. Ornamentation consists of awnings and shutters on the windows.

This dwelling is located on the north side of Mill Swamp Road on a rural property that is accessed by a long gravel driveway. There is another property that is between it and the road frontage. There are ten outbuildings and four silos that are located behind the main dwelling. Trees surround the homesite and around either side of the outbuildings. Fields are located on the east and west side of the homesite.

This property is an undistinguished example of a mid-century, Colonial Revival style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 046-5569
House, 11063 Mill Swamp Road

This single-story frame dwelling was built in 1936 according to local records and exhibits a Ranch style. It has an L-shaped form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by a central interior brick chimney. The main entrance is centered on the front façade and sheltered by a front gable portico supported by square columns. Fenestration consists of single, six over six double-hung sash windows and single, eight over eight double-hung sash windows. A carport extends off the east elevation and is supported by tapered columns set on brick piers. Ornamentation is limited to shutters on the windows.

This dwelling is located on the north side of Mill Swamp Road on a small rural residential lot. The front yard is open and grassy with trees along the perimeter and bushes along the front façade. A shared driveway runs along the west side of the dwelling with brick piers located on either side along the road frontage. An outbuilding not visible from the public right of way, but ~~is~~ visible on aerial photography is located behind the main dwelling.

This property is an undistinguished example of an early 20th-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-0053
Allmond House, 10532 White Marsh Road

Previous survey recorded this resource as a circa 1810, one-and-a-half story frame dwelling clad in weatherboard with gable-end brick chimneys. This building is no longer present and is assumed to have been demolished. It has been replaced by a modern, prefabricated modular home.

The building was located on the south side of White Marsh Road just west of the intersection with Bellevue Road. It rested within a building complex set back from the road surrounding by open agricultural fields. At this time, a number of historic and nonhistoric agricultural outbuildings remain in the complex. In place of the original house is a modern mobile home.

This dwelling has been demolished and is therefore considered ***not eligible*** for listing in the NRHP on an individual basis or as part of an historic district.

VDHR ID# 090-0055
Delk Crossroads Farm, 12251 White Marsh Road

Previous survey recorded this resource as a post-1910 dwelling. This building is no longer present and is assumed to have been demolished. It has been replaced by a modern, prefabricated modular home.

The building was located on the west side of White Marsh Road north of the intersection with Beechland Road. At this time, the site has been subdivided into a number of small rural lots occupied by modular homes set near the road.

This dwelling has been demolished and is therefore considered ***not eligible*** for listing in the NRHP on an individual basis or as part of an historic district.

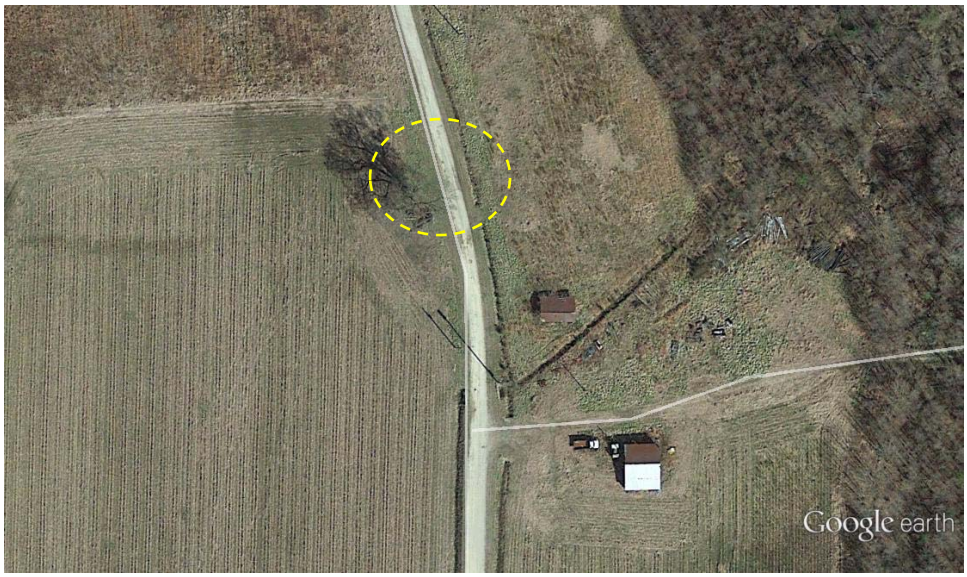
VDHR ID# 090-0058
Bell Farm Kitchen, 7098 Beechland Road

The circa 1830 kitchen building previously recorded on this property and identified as the primary resource remains in a deteriorated condition next to the early-twentieth century dwelling on the property. This single dwelling appears to have been building in the early-twentieth century and remains in good condition. The building exhibits a Vernacular design with a two-story I-house from front block and one-story central rear ell. The frame structural system rests on a continuous brick foundation and is clad with vinyl siding. It is topped with a side gable roof with central cross gable covered in asphalt shingles. Exterior-end brick chimneys extend up each side of the main block at the ridge. The main entrance is centered on the front façade and sheltered by a full-width hipped roof porch that has been partially enclosed. Fenestration consists of double-hung sash six over six windows. The building is minimally ornamented with a central cross gable on the front, gable returns on the sides, and shouldered brick chimneys.

The building is set on the south side of Beechland Road east of White Marsh Road on a large rural property. The home is set back from the road within a cluster of trees at the end of a gravel driveway. Set to the side of the house is a number of historic barns and outbuildings. Surrounding the building complex are open agricultural fields.

This property is an undistinguished example of an early-twentieth century, Vernacular dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-0059
Dais, Ida House, 8229 Beechland Road



This resource was previously recorded in 1973, at which time it was recorded as a one-story frame home, built in two stages, the first between 1790 and 1800, and the second c.1820. It was noted as having a gable roof with brick chimneys. Comparison of older aerial photographs and field survey at this time revealed that the building is no longer present and is assumed to have been demolished. Set in the vicinity are two twentieth century barns.

The previously mapped location of the resource is off of Beechland Road, on a larger rural property. Survey at this time revealed that the property is now part of the Beaverdam Air Park Estates. The mapped Dais Ida House location was within a grassy field between a farm road and a patch of woodland. Across the farm road to the west is a large agricultural field with a timber strand beyond. To the east is a small patch of woodland bordering a small creek or drainage. Beyond the treeline is another smaller agricultural field surrounded by woodland.

As this dwelling has been demolished and no evidence of it remains, it is therefore considered ***not eligible*** for listing in the NRHP on an individual basis or as part of an historic district.

VDHR ID# 090-5146
Cemetery, 14664 White Marsh Road

This family cemetery consists of three marked graves. They are marked with concrete slabs laid on the ground with inscriptions on top. The earliest grave is marked from the early 20th-century and the latest from 1991.

This cemetery is located on the east side of White Marsh Road on a small plot of open land surrounded by trees and wooded area. There is no fence or barrier around the cemetery.

The cemetery is an undistinguished example of a typical twentieth century rural family plot and does not embody distinctive characteristics or possess significant or unique architectural or design features. The cemetery therefore does not meet NRHP Criterion Consideration D and is considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5147
House, 12283 White Marsh Road

This two-story frame dwelling was built in 1898 according to local records and exhibits a Folk Victorian style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof with lower central gable slightly protruding from the façade covered in asphalt shingles. The roof is pierced by two interior end brick chimneys. The main entrance is centered on the front façade and is sheltered by a wraparound hipped roof porch supported by spindled posts. A small transom is located above. Fenestration on the first and second-floor consists of one over one double-hung sash windows. There is an arched one over one double-hung sash window located in the pediment of the forward projecting front gable on the second-story; and a divided fanlight on the lower front gable on the porch pediment. The dwelling is ornamented with cornice and post-face brackets and shutters on the windows.

This dwelling is located on the west side of White Marsh Road on a rural lot that is open grassy area surrounded by wood areas. A long gravel driveway leads to the north side of the dwelling to a garage at the rear. A few large trees are spread out across the front yard and the area is flat.

This property is an undistinguished example of a late 19th-century, Folk Victorian dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5148
House, 11649 White Marsh Road

This single-story masonry dwelling was built in 1964 according to local records and exhibits a Ranch style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has brick walls laid in a stretcher bond topped with a side gable roof covered in asphalt shingles. The roof is pierced by an exterior end brick chimney. The main entrance is centered on the front façade and is sheltered by a front gable portico supported by decorative metal posts. Fenestration consists of paired and tripartite, six over six double-hung sash windows. A picture window consisting of a central single-pane fixed window flanked on either side by a four over four double-hung sash window is also present. Ornamentation is limited to sills and shutters on the windows.

This dwelling is located on the west side of White Marsh Road on a small rural residential lot. The lot is flat and open with a pond on the north side. A few trees are spread throughout the property and a gravel driveway leads to the north side of the dwelling to a garage, shed, and carport. A shed is located on the south side of the dwelling near the trees.

This property is an undistinguished example of a mid-century, Ranch dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5149
House, 435 Bellevue Road

This two-story frame dwelling was built circa 1920 according to a site survey and exhibits a Vernacular style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in standing seam metal. There are no chimneys present. The main entrance is centered on the front façade and sheltered by a full-width single story porch supported by square columns. Fenestration on the first and second-floor consists of single, six over six double-hung sash windows. Ornamentation is limited to shutters on the windows and a divided transom light above the main entrance.

This dwelling is located on the east side of Bellevue Road on a large farmstead. The area surrounding the dwelling is open pasture with woods to the south and east. Most of the fields are fenced in for livestock. A gravel driveway leads to the dwelling and the outbuildings behind. There are ten outbuildings located behind and near the main dwelling including barns and sheds.

This property is an undistinguished example of an early 20th-century, Vernacular dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5150
House, 392 Bellevue Road

This one and a half story frame dwelling was built in 1949 according to local records and exhibits a Minimal Traditional style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in aluminum siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by a central interior and exterior end brick chimney. The main entrance is centered on the front façade and sheltered by a partial width porch supported by wood posts. Fenestration consists of single and double, six over six double-hung sash windows and a bay window with single-pane fixed glass. Ornamentation is limited to shutters on the windows. A carport extends off the south elevation and has two-bays that is created by an extension of the roof line.

This dwelling is located on the west side of Bellevue Road on a rural lot that consists of mostly open fields. The area around the dwelling contains trees and a pond is located at the rear of the property. A gravel driveway leads to the attached carport on the south side of the dwelling and continues to the rear. There are six outbuildings in the rear and a silo. A mobile home is located to the north of the main dwelling.

This property is an undistinguished example of a mid-century, Minimal Traditional dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5151
House, Bellevue Road

This single-story frame dwelling was built circa 1950 according to site survey and exhibits a Vernacular style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in weatherboard siding topped with a side gable roof covered in asphalt shingles. There are no chimneys present. The main entrance is centered on the front façade and is unsheltered. Fenestration consists of single, six over six double-hung sash windows with ornamentation limited to shutters on the windows.

This dwelling is located on the west side of Bellevue Road on a small rural residential lot. The area around the dwelling is open while surrounding the lot is wooded area. There are no outbuildings associated with the property.

This property is an undistinguished example of a mid-century, Vernacular dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5152
House, 11372 White Marsh Road

This two-story frame welling was built circa 1900 according to site survey and exhibits a Vernacular style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by exterior end brick chimneys. The main entrance is centered on the front façade and is sheltered by a full-width enclosed porch. Fenestration consists of ribbons of one over one double-hung sash windows on the first-floor and single, six over six double-hung sash windows on the second-floor. Ornamentation is limited to shutters on the windows.

This dwelling is located on the east side of White Marsh Road on a rural lot. The area surrounding the homesite is open agricultural fields surrounded by fencing. A few trees are located in the homesite that is accessed by a long gravel driveway. A barn is located behind the trees to the southeast of the main dwelling.

This property is an undistinguished example of an early twentieth-century, Vernacular dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5153
House, 11119 White Marsh Road

This two-story frame dwelling was built circa 1940 according to site survey and exhibits a Vernacular style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in standing seam metal. There is an exterior end brick chimney. The main entrance is centered on the front façade and is sheltered by a partial width porch supported by wood posts. Fenestration on the first and second-floor consists of single, six over six double-hung sash windows. The dwelling lacks any major ornamentation.

This dwelling is located on the north side of White Marsh Road on a large rural property. The homesite is surrounded by open pasture with cows located in them.

This property is an undistinguished example of a mid-twentieth-century, Vernacular dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5154
House, 10837 White Marsh Road

This single-story frame dwelling was built circa 1930 according to a site survey and exhibits a Vernacular style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by a small metal flue on the front slope. The main entrance is slightly offset on the front façade and sheltered by a partial width porch supported by square posts. Fenestration consist of single, six over six and four over four double-hung sash windows. A picture window consisting of a central six over six double-hung sash window flanked on either side by a four over four double-hung sash window. There are two single-pane casement windows on the east-end of the front façade. The dwelling lacks any major ornamentation.

This dwelling is located on the north side of White Marsh Road on a rural agricultural property. The homesite is accessed by a long gravel driveway that leads to the front of the dwelling and the outbuildings behind it. The lot is mostly open fields used for crops and a wooded section to the west of the dwelling. A pond is located northwest of the dwelling. There are seven outbuildings associated with the property.

This property is an undistinguished example of an early 20th-century, Vernacular dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5155
House, 2557 Moonlight Drive

This single-story frame dwelling was built in 1957 according to local records and exhibits a Minimal Traditional style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by a central interior brick chimney. The main entrance is centered on the front façade and is unsheltered. Fenestration consists of single, one over one double-hung sash windows and a picture window. The picture window has a central single-pane fixed window flanked on either side by a one over one double-hung sash window. Ornamentation is limited to shutters on the windows and a brick veneer laid in a stretcher bond along the bottom half of the front façade.

This dwelling is located on the east side of Moonlight Road on a small rural residential lot. The lot is mostly open grassy area surrounded by wooded land. A gravel driveway leads to the front of the dwelling and to a carport on the south side.

This property is an undistinguished example of a mid-century, Minimal Traditional dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5156
House, 968 Bellevue Road

This two-story frame dwelling was built circa 1910 according to site survey and exhibits a Folk Victorian style. It has a T-shape form and remains in fair condition. The dwelling rests on a pier foundation and has walls clad in vinyl siding topped with a side gable roof covered in standing seam metal with a rear cross gable ell. The roof is pierced by two interior brick chimneys. The main entrance is centered on the front façade and is sheltered by a full-width single-story porch supported by turned wood posts. Fenestration on the first and second-floor consists of single, six over six double-hung sash windows. Ornamentation consists of exposed rafter-ends on the porch and the turned posts.

This dwelling is located on the west side of Bellevue Road on a rural lot that has open fields for horses on the north side and the homesite on the south. A gravel driveway leads to the north side of the dwelling to three outbuildings on the edge of the field. There are trees spread throughout the homesite with grassy areas in between. A small workshop is located in the south corner of the lot behind the dwelling.

This property is an undistinguished example of an early 20th-century, Folk Victorian dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5157
House, 6452 Mullet Drive

This single-story frame dwelling was built in 1963 according to local records and exhibits a Ranch style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by a central interior brick chimney. The main entrance is slightly offset and is sheltered by a metal awning supported by metal posts. Fenestration consists of single, two over two double-hung sash windows and a picture window. The picture window has a central single-pane fixed window flanked on either side by a two over two double-hung sash window. A secondary entrance is located on the north end of the front façade. The dwelling lacks any major ornamentation.

This dwelling is located on the west side of Mullet Drive on a small rural residential lot. The lot is mostly open area surrounded by wooded area and a few trees spread throughout. A gravel driveway leads to the north side of the dwelling and to a carport in the rear of the lot.

This property is an undistinguished example of a mid-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5158
House, 6420 Mullet Drive

This single-story frame dwelling was built in 1959 according to local records and exhibits a Ranch style. It has a T-shape form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a cross gable roof covered in asphalt shingles. The roof is pierced by a central interior cinder block chimney and a brick exterior end chimney. The main entrance is offset on the protruding wall of the forward projecting front gable portion of the front façade and is unsheltered. Fenestration consists of single and paired, two over two double-hung sash windows and a picture window. The picture window has a central single-pane fixed window flanked on either side by a two over two double-hung sash window. Ornamentation consists of shutters on the windows.

This dwelling is located on the west side of Mullet Drive on a rural residential lot. The lot is mostly open along the front and wooded at the rear. A gravel driveway forms a loop in the front of the dwelling and runs to three outbuilding and a carport on the south side of the lot.

This property is an undistinguished example of a mid-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5159
House, 9789 White Marsh Road

This two-story frame dwelling was built circa 1910 according to site survey and exhibits a Folk Victorian style. It has a rectangular form, remains in poor condition, and is abandoned. The dwelling rests on a pier foundation and has walls clad in asbestos siding topped with a side gable roof with lower central gable covered in standing seam metal. The roof is pierced by two interior end brick chimneys. The main entrance is centered on the front facade and sheltered by a partial width single-story porch supported by wood posts. Fenestration consists of single, two over two double-hung sash windows. Ornamentation is limited to post-face brackets on the porch.

This dwelling is located on the north side of White Marsh Road on a rural lot that is heavily overgrown. It appears to have been abandoned for some time and the woods have taken over. A driveway leads to the front of the dwelling and an outbuilding appears on aerial photography, but is not visible from the public right of way.

This property is an undistinguished example of an early 20th-century, Folk Victorian style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5160
House, 9091 White Marsh Road

This two-story frame dwelling was built in 1905 according to local records and exhibits a Colonial Revival style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in standing seam metal. The roof is pierced by two exterior end brick chimneys and one central interior brick chimney. The main entrance is centered on the front façade and is sheltered by a front gable portico supported by Doric columns. Fenestration consists of single, six over six double-hung sash windows. Ornamentation consists of shutters on the windows and Doric columns on the front portico.

This dwelling is located on the north side of the intersection of White Marsh Road and Berrymans Corner Road on a rural lot. The lot has trees and landscaping throughout and is surrounded by agricultural fields. There is a workshop located in the backyard.

This property is an undistinguished example of an early 20th-century, Colonial Revival style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5161
House, 9100 White Marsh Road

This single-story frame dwelling was built in 1949 according to local records and exhibits a Minimal Traditional style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in aluminum siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by a central interior brick chimney and a metal flue. The main entrance is centered on the front façade and is sheltered by a front gable portico supported by fluted Doric columns. Fenestration consists of single, eight over eight double-hung sash windows; paired, one over one double-hung sash windows; and a six over six double-hung sash window flanked by divided sidelights. Ornamentation is limited to the columns on the portico.

This dwelling is located on the southeast corner of the intersection of White Marsh Road and Berrymans Corner Road. The lot contains a few trees spread out and bushes along the front foundation. A driveway leads to the west side of the dwelling to a vehicle shed on the west side of the dwelling.

This property is an undistinguished example of a mid-century, Minimal Traditional style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5162
House, 274 Berrymans Corner Road

This two-story frame dwelling was built circa 1890 according to site survey and exhibits a Folk Victorian style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof with lower central cross gable covered in metal. The roof is pierced by two central interior brick chimneys. The main entrance is centered on the front façade and is sheltered by a single-story full width screen porch. Fenestration consists of single and a tripartite, one over one double-hung sash windows. Ornamentation consists of a balustrade around the porch and a diamond shaped window in the pediment of the front gable portion of the front façade.

This dwelling is located on the west side of Berrymans Corner Road on a large rural property. The land is mostly open agricultural fields surrounded by woods and a trees around the homesite. There is a long driveway that leads to the homesite with a mobile home and three outbuildings in the vicinity.

This property is an undistinguished example of a turn-of-the-century, Folk Victorian style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5163
House, 337 Berrymans Corner Road

This single-story frame dwelling was built in 1942 according to local records and exhibits a Vernacular style. It has a rectangular form and remains in fair condition. The dwelling rests on a continuous foundation and has walls clad wood siding topped with a side gable roof covered in corrugated metal. The roof is pierced by two central interior brick chimneys. The main entrance is centered on the front façade and is sheltered by an enclosed partial-width porch. Fenestration on the enclosed porch consists of a ribbon of one over one double-hung sash windows; on the main façade it consists of six over six double-hung sash windows. Ornamentation is limited to aluminum siding on the enclosed porch on the front façade.

This dwelling is located on the east side of Berrymans Corner Road on a rural property. The homesite has trees spread throughout while the surrounding area is open agricultural fields. A driveway loops around the main dwelling and between it and a secondary dwelling. There are six outbuildings and six grain silos on the property surrounding the homesite.

This property is an undistinguished example of a mid-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5164
House, 285 Berrymans Corner Road

This one and a half story frame dwelling was built circa 1900 according to site survey and exhibits a Vernacular style. It has a rectangular form and remains in poor condition. The dwelling rests on a continuous foundation topped with a side gable roof covered in asphalt shingles. The roof is pierced by an exterior end brick chimney and four, shed roof dormers. Two are on the front and two on the rear slope. One dormer contains a four-pane fixed window while the other contains a six-pane fixed window. The main entrance is offset on the front façade and sheltered by a full-width porch supported by wood posts. Fenestration consists of single, six over six double-hung sash windows. The dwelling lacks any major ornamentation.

This dwelling is located on the east side of Berrymans Corner Road on a rural lot. The homesite contains trees spread throughout and is accessed by a long gravel driveway. A barn is located in the backyard and the area is surrounded by crop fields.

This property is an undistinguished example of a turn-of-the-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5165
Simmons and Brown Cemetery

This family cemetery contains about 30 graves with the oldest dating from 1921 and the newest from 2010. Most of the headstones are made of concrete and lay flat on the ground with a few standing ones.

The cemetery is located in the middle of an agricultural crop field and is slightly above grade from the field. It is accessed by a long dirt road and a single tree is located by the graves. No fence surrounds the site.

The cemetery is an undistinguished example of a typical twentieth century rural family plot and does not embody distinctive characteristics or possess significant or unique architectural or design features. The cemetery therefore does not meet NRHP Criterion Consideration D and is considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5166
House, 1122 Berrymans Corner Road

This single-story frame dwelling was built circa 1930 according to site survey and exhibits a Vernacular style. It has a rectangular form and remains in poor condition. The dwelling rests on a continuous foundation and has walls clad in aluminum siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by an interior slope metal flue. The main entrance is sheltered on the front façade by a full width screen porch. Due to vacancy and abandonment the windows and porch has been boarded up.

This dwelling is located on the northwest side of Berrymans Corner Road on a small rural residential lot. The lot is heavily wooded and overgrown. No outbuildings were observed during the survey.

This property is an undistinguished example of an early 20th-century, Vernacular style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5167
House, 1097 Berrymans Corner Road

This single-story frame dwelling was built circa 1965 according to site survey and exhibits a Ranch style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in vinyl siding topped with a side gable roof covered in asphalt shingles. The roof is pierced by an interior slope brick chimney. The main entrance is offset on the front façade and sheltered by a front gable portico supported by turned wood posts. Fenestration consists of single, six over six double-hung sash windows and a picture window. The picture window has a central sixteen-pane fixed window flanked on either side by a four over four double-hung sash window. A secondary entrance with French doors is offset on the front façade. Ornamentation is limited to shutters on the windows and a round vent in the pediment of the portico.

This dwelling is located on the east side of Berrymans Corner Road on a rural residential lot. It is mostly open grassy area in the front yard with a few trees spread throughout and bushes along the front foundation. There is a driveway that runs along the north side of the dwelling and wraps around the rear. There are two pre-fabricated sheds on the property.

This property is an undistinguished example of a mid-century, Ranch style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5168
House, 1676 Berrymans Corner Road

This two-story frame dwelling was built in 1870 according to local records and exhibits a Folk Victorian style. It has a rectangular form and remains in good condition. The dwelling rests on a continuous foundation and has walls clad in wood siding topped with a side gable roof covered in asphalt shingles. There are cross gables located on the wings on either side of the main body of the dwelling. Three interior brick chimneys pierce the main roof. The main entrance is centered on the front façade and is sheltered by a partial width single-story porch supported by turned wood posts. Fenestration consists of single, six over six double-hung sash windows and single, four over four double-hung sash windows. A round divided window is located in the pediment of the north wing. Ornamentation includes shutters on the windows, post-face brackets, and running trim on the porch. There are cornice brackets and metal clad pent roofs on the front façade.

This dwelling is located on the west side of Berrymans Corner Road on a rural lot. The homesite is surrounded by large crop fields and a wooded area at the rear of the property. A gravel driveway leads to the front of the dwelling and wraps around the rear attached garages. There are ten outbuilding surrounding the dwelling.

This property is an undistinguished example of a 19th-century, Folk Victorian style dwelling. It does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5171
Diana Southall Carrol Cemetery, White Marsh Road

This family cemetery plot was identified by the presence of one headstone. The headstone marks the burial of Dianna Southall Carroll who died in 1887. The cemetery is not maintained and is no longer in use. The single observed headstone is a marble slab with a stone base, however, the stone has fallen off the base and lies at its side. No other depressions or evidence of burials was observed. There is no fence or enclosure.

This cemetery is set on the east side of White Marsh Road on a large rural property. The single headstone is set within a wooded area at the end of a long farm road leading through an agricultural field, about 0.25 miles back from the road. The cemetery is overgrown and unmaintained. There is some periwinkle in the area, but no other evidence of intentional landscaping.

This cemetery is an example of a typical nineteenth century rural family cemetery. It is set on a large rural property with no associated home or other remaining improvements. The cemetery does not embody distinctive characteristics or possess significant or unique architectural or design features. The cemetery therefore does not meet NRHP Criterion Consideration D and is considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR ID# 090-5172
Mary Person Cemetery, Beechland Road

This family cemetery plot was identified by the presence of one headstone. The headstone marks the burial of Mary Persons, who died in 1829. The cemetery is not maintained and is no longer in use. The single observed headstone is a marble slab leaning against a tree. No other depressions or evidence of burials was observed. There is no fence or enclosure.

This cemetery is set on the south side of Beechland Road on a large rural property. The single headstone is set within a wooded area bordering a transmission line corridor. A long gravel farm lane leads to the site which is about 0.33 miles back from the road. There is no evidence of intentional landscaping.

This cemetery is an example of a typical nineteenth century rural family cemetery. It is set on a large rural property with no associated home or other remaining improvements. The cemetery does not embody distinctive characteristics or possess significant or unique architectural or design features. The cemetery therefore does not meet NRHP Criterion Consideration D and is considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR# 090-5173
Shed, 7300 Beechland Road

This shed appears to have been built circa 1920 according to site survey and exhibits no discernable style. The one-story building has a rectangular form. The wood frame structural system is clad with weatherboard and rests on a concrete pier foundation. It is topped by a front-gable roof covered with standing seam metal. There is a single entrance offset on the front facade. There is no other fenestration on the building. The building is simple and unornamented.

This shed is located on the south side of Beechland Road on a small rural lot. The shed sits back from the road in a small clearing. The rest of the property is wooded and overgrown. There are no other improvements or associated buildings on the property.

This shed is an example of a typical early-twentieth century rural outbuilding in the region. The building exhibits no discernable style with little architectural distinction. It was likely associated with a home or other primary resource historically, however, no other buildings remain on the property. Overall, it does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building remains as an isolated secondary resource, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

VDHR# 090-5174
House, Berrymans Corner Road

This single dwelling appears to have been built circa 1920 according to site survey and exhibits a Vernacular design. The one-story building has a rectangular front block with a full-width rear ell. The wood frame structural system is clad with weatherboard and rests on a pier foundation. It is topped by a side-gable roof covered with asphalt shingles. The main entrance is set centrally on the front and is sheltered by a small canopy. Fenestration consists of two-over-two double-hung sash windows. The building is simple and unornamented.

This house is located on the east side of Berrymans Corner Road on a large rural property. The house sits back from the road in a small clearing within a wooded area. It is approached by a dirt farm road that crosses through an agricultural field at the front of the property. Set to the rear of the house is a small outbuilding that may be an outhouse. The ruins of another small outbuilding are located nearby.

This resource is an example of a typical early-twentieth century rural dwelling in the region. The building exhibits a Vernacular design with little architectural distinction. It includes the remains of two small domestic outbuildings. Overall, it does not embody distinctive characteristics or possess significant or unique architectural or design features and reconnaissance-level research revealed no known significant historical associations. The building is located in an area of discontiguous historic resources, and is, therefore, considered ***not eligible*** for listing in the NRHP on an individual basis or as part of a historic district.

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7. CONCLUSIONS AND RECOMMENDATIONS

In December 2019, Dutton +Associates, LLC (D+A) conducted a Phase I architectural resource survey of the Cavalier Solar Study Area in Isle of Wight and Surry Counties, Virginia, with an update conducted in September 2020. The effort involved architectural investigations to confirm the presence or absence of cultural resources located within and in the vicinity of the project area and assess their potential eligibility for listing in the National Register of Historic Places (NRHP). Those resources considered NRHP-eligible were assessed for potential impacts brought about by the project.

The study area for this effort may not correspond precisely with the boundaries chosen for the final development project. Rather, the study area represents the maximum extent of the parcels being considered for development, and the final project area may be smaller than the current study area. As such, impacts to historic resources may need to be reassessed following final engineering.

The architectural resources survey for the Cavalier Solar Project resulted in the identification and recordation of fifty-eight (58) architectural resources greater than 50 years of age (constructed in 1970 or earlier) located within the one-half mile architectural survey area, eleven (11) of which are located within the project area. Of the surveyed resources, nine (9) were previously recorded (VDHR# 046-0064/0067, 046-0069, 090-0053, 090-0055, 090-0058, 090-0059) and forty-nine (49) were newly recorded during this Phase I Survey (VDHR# 046-5548/5569, 090-5146/5168, 090-5171/5174). Three of the previously recorded sites were found to have been demolished (VDHR# 090-0053, 090-0055, and 090-0059), and one has been relocated out of survey area and renumbered (VDHR# 046-0067 now VDHR# 046-5258). The surveyed resources consist primarily of domestic buildings and farmsteads from the late-eighteenth to mid-twentieth century. Also surveyed were a number of isolated agricultural buildings not associated with a standing dwelling, as well as several small rural cemeteries. Five of the surveyed resource represent early settlement and agricultural development in the region, and are considered potentially NRHP-eligible. The rest of the surveyed resources reflect national trends in building styles and do not appear to reflect any unique or significant design or historical associations, and as such, are recommended to be not eligible for listing in the NRHP individually or collectively.

The five potentially NRHP-eligible resources were both assessed for impacts brought about by the project through inspection of existing conditions and viewshed analysis. This effort found that existing vegetation, treelines, and intervening development will provide screening of the project area from three of the resources (Carroll House: #046-0064, Gale House #046-0066, and Delk Farm #046-0069), and supplemental landscape buffer to be planted as part of the project will provide screening from one other resource (11231 Mill Swamp Road #046-5566). As such, the project will likely not be visible from these resources themselves or most public vantage points near them and is therefore not anticipated to introduce any substantially different components into their viewsheds and is recommended to pose no more than a ***minimal impact*** to these resources. One resource (Jones House: #046-0065) is located directly within the project study area and improvements are proposed to take place on the landscape surrounding the property, but not within the homesite itself. The historic setting of this resources are already partially compromised by the presence of an existing high-voltage transmission line, however, the project still has the potential to introduce new and incompatible features. Visibility from both the property and the public ROW

in front will be minimized by proposed landscape screening to be planted along the road and around the homesite, and therefore, the project has the potential to pose a ***moderate impact*** to this resource. A table of NRHP-eligible resources with recommendations regarding project impacts is provided in Table 7-1 below.

Table 7-1: NRHP-eligible architectural resources with recommendations of project impacts

VDHR ID#	Resource Name/Address	Year Built	NRHP Eligibility	Project Impacts
046-0064	**Carroll House, 11150 Burwells Bay Road**	**c.1812**	**VDHR: NRHP-Eligible**	**Minimal Impact**
046-0065	**Jones House, 9355 Burwells Bay Road**	**1780**	**Recommended Potentially NRHP-Eligible**	**Moderate Impact**
046-0066	**Gale Farm, 9310 Jones Drive**	**1798**	**Recommended Potentially NRHP-Eligible**	**Minimal Impact**
046-0069	**Delk Farm, 10114 Mill Swamp Road**	**1775**	**Recommended Potentially NRHP-Eligible**	**Minimal Impact**
046-5566	**House, 11231 Mill Swamp Road**	**1790**	**D+A: Potentially NRHP-Eligible**	**Minimal Impact**

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APPENDIX A: RESUMES

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ROBERT J. TAYLOR, JR
Senior Architectural Historian

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

Education

Master of Arts, 2009
Historic Preservation
Savannah College of Art and Design
Savannah, Georgia

Bachelor of Arts, 2005
Historic Preservation
University of Mary Washington
Fredericksburg, Virginia

Awards

Eagle Scout, 2001

Mr. Taylor holds a B.A. in Historic Preservation from University of Mary Washington and a M.A. in Historic Preservation from Savannah College of Art and Design. He has over 10 years of Cultural Resource Management Experience and has taken part in projects in Virginia, North Carolina, Maryland, Delaware, New Jersey, Rhode Island, Pennsylvania, Ohio, Florida, and California.

His experience in Cultural Resource Management includes working on both Architectural and Archaeological projects while participating in all phases of compliance from project initiation and development to completion. His work includes conducting field surveys, researching and documenting historic resources, completing site file forms, writing reports, preparing *NRHP* evaluations and documentation for individual resources and historic districts, compiling HABS/HAER documentation packages, preparing Cell Tower compliance packages, and conducting archaeological testing. He has a thorough understanding of the laws and regulations that govern cultural resources and has assisted with a number of Cultural Resource Management Plans, Programmatic Agreements, and Memorandum of Agreements. Outside of CRM, he has worked for the Thomas Jefferson's Monticello Foundation where he was a field archaeologist and assisted with the long-term, Plantation Survey Project on Monticello Mountain. Mr. Taylor's primary interests lie in Architectural Forensics and the study of building evolution.

As Senior Architectural Historian for Dutton + Associates, Mr. Taylor manages and conducts all aspects of historic and architectural resource projects and studies.

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Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

ROBERT J. TAYLOR, JR
Senior Architectural Historian

Professional Experience

Dutton + Associates, LLC, Architectural Historian, Richmond, Virginia, March 2009-present.
Manages architectural history studies, provides regulatory and compliance consultation, conducts Historic Resources Surveys, prepares NRHP nominations, HABS/HAER packages, site forms, and other documentation packages; performs research and context development, and authors project reports.

Thomas Jefferson Monticello Foundation, Field Archaeologist, Charlottesville, Virginia, Winter 2008- 2009. Conducted archaeological testing, assisted with site research, performed lab work

Janus Research, Inc, Architectural Historian, Tampa, Florida, August 2005- May 2008.
Conducted field surveys, Prepared NRHP and HABS/HAER documentation packages, authored Cultural Resource Assessment Survey Reports

Example Projects and Publications

Transmission Line Projects
Phase I Cultural Resources Survey of the Cunningham to Elmont 500 kV Transmission Line, Multiple Counties
Phase I Cultural Resources Survey of the TL47 230kV Transmission Line Rebuild, Multiple Counties
SCC Pre-Application Study for the Gainesville-Haymarket Substation and Transmission Line, Prince William Co
Cultural Resources Survey of the Bearwallow-Faraday Transmission Line Rebuild Project, Tazewell County
Phase I Cultural Resources Survey of the Dominion Line 567 Wilcox Wharf to Windmill Point Rebuild Project, Charles City and Prince George County
Phase I Survey of the Chase City-Kerr Dam, Line 137 and 138, Mecklenburg County
SCC Pre-Application Study of the Mount Storm-Valley Rebuild Project, Rockingham County
Phase I Survey of the Hayes-Yorktown 230kV Transmission Line, Gloucester County

Substation Projects
SCC Pre-Application Study of the Elklick Substation Expansion, Fairfax Co
SCC Pre-Application Study of the Roundtable Substation, Fairfax County
Phase I Survey of the Possum Point Project, Prince William County

Wind Power Projects
Phase I Cultural Resources Survey of the Rocky Forge Wind Project, Botetourt County

Solar Projects
Phase I Survey of the Briel Solar Farm, Henrico Co
Phase I Survey of the Puller Solar Project, Middlesex County
Phase I Survey of the Whitehouse Solar Project, Louisa County
Phase I Survey of the Hosier Road Solar Project, Suffolk County
Phase I Survey of the Twitty Creek Solar Project, Charlotte County

Other
Phase III Investigations of the Spring Hill Plantation Site for the Dominion Reymet Road Expansion Project, Chesterfield County
HALS Photography for the Skiffe's Creek 500kV Transmission Line Project, Charles City County

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DARA FRIEDBERG
Architectural Historian

D
A

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

Education

Master of Science, 2004
Historic Preservation
University of Pennsylvania
Philadelphia, Pennsylvania

Bachelor of Arts, 1999
Historic Preservation
Mary Washington College
Fredericksburg, Virginia

Ms. Friedberg holds a M.S. in Historic Preservation, concentrating in Architectural Conservation, from University of Pennsylvania and a B.A. in Historic Preservation from Mary Washington College. She has worked in historic preservation and conservation since 1999 and has taken part in projects in Virginia, Maryland, Pennsylvania, Washington, D.C., South Carolina, Georgia, Connecticut, New York, Illinois, Ohio, and Tennessee.

Her experience in Cultural Resource Management includes conducting field surveys, researching and documenting historic resources, preparing National Register of Historic Places nominations, performing archival research, assisting in Federal Tax Credit projects, and completing material analyses of historic mortar and paint.

Prior to working at Dutton + Associates, she was employed as a conservator. This allowed her to conduct multiple conditions assessments of architecture, monuments, and sculptures as well as provide treatment recommendations and project specifications. She has also physically worked on the conservation of stone, metal, and decorative painting. At the completion of each project she provided thorough documentation of each process undertaken.

As an Architectural Historian for Dutton + Associates, Ms. Friedberg collaborates on all aspects of historic and architectural projects including performing field work, conducting project research, and authoring project reports.

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Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

DARA FRIEDBERG
Architectural Historian

Professional Experience

Dutton + Associates, LLC, Architectural Historian, Midlothian, Virginia, 2013-Present
Conducts historic resources surveys, performs background research, develops historic contexts, writes National Register nominations, and authors and formats project reports

Kreilick Conservation, LLC, Conservator, Oreland, Pennsylvania, 2006-2012
Completed conditions assessments and treatment recommendations for stone and metal projects, conserved stone and metal architectural elements, monuments, and sculptures, and authored conservation reports.

Powers & Company, Inc., Preservation Associates, Philadelphia, Pennsylvania, 2002-2006
Conducted historic resources surveys, performed background research, assisted with Federal Historic Preservation Tax Credit projects, completed mortar and historic paint analyses, completed conditions assessments and recommendations for buildings, produced reports for large scale restoration projects, and created project specifications.

Albert Michaels Conservation, Inc., Conservation Technician, Harrisburg, Pennsylvania, 2001-2002
Conserved decorative paintings and refinished ornate wood, and authored conservation reports.

KCI Technologies, Inc., Cultural Resource Specialist, Hunt Valley, Maryland, 2000-2001
Conducted historic resources surveys, performed background research, and authored project reports.

Restoration Concepts, Restoration Intern, Burlington, Vermont, 1999
Assisted in the restoration of a building.

Example Projects

National Register of Historic Places Nominations
- Tower Building, Richmond
- Lee Medical Building, Richmond
- Fuqua Farm, Chesterfield

Preliminary Information Forms
- North Thompson Street Historic District, Richmond
- Virginia Avenue Elementary School, Petersburg

Interpretive Signs
- Skiffes Creek Interpretive Signs, multiple counties
- Spring Hill Plantation Interpretive Signs, Chesterfield Co.

Viewshed Analyses
- Viewshed Assessment for Fort Evans, Loudoun Co.
- Viewshed Analysis for Ellerslie, Surry Co.

Military Analyses and Landscape Studies
- Phase IA Assessment and Military Terrain Analysis of the Plantation Woods Property, Spotsylvania Co.
- Phase I, Viewshed Assessment, and Military Terrain Analysis for the Potato Run Mitigation Bank, Culpeper Co.
- Assessment of Two Core Areas of the Battle of Buckland Mills, Prince William Co.

Cultural Resource Survey and Compliance Reports
- Cultural Context and Thematic Study for the Proposed Revitalize RVA Project, Richmond
- Assessment of Fulton Gas Works, Richmond
- Documentary Study of the Cromley Row Project Area, Alexandria
- Study of Washington Boundary Ditches, Fairfax Co.
- Intensive Level Survey for Warehouse No. 3 of the Richmond Intermediate Terminal, Richmond
- Economic Context of Middlesex County and the Palmer House, Middlesex Co.
- Phase I Survey for the Remington-Gordonsville Transmission Line Rebuild Project, multiple counties
- Phase II Archaeological Evaluation of Site 44LD1244, Loudoun Co.

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STAFF REPORT

REQUEST TO REMOVE:

The request of Jean Barcroft Trustee, Michael A. Seward, Michael A. and Emily B. Seward, 476 LLC, and Mitchell Delk and Jane Delk Batten to withdraw Parcels/Part of Parcels 10-01-025, 10-01-20,10-01-021, 10-01-023, 10-01-027, 11-01-005 and 11-01-015, totaling 646.71 acres of land, from the Moonlight AF District, located on Mill Swamp Road, Jones Drive, and Burwell's Bay Road from the Moonlight Ag/Forestal District.

ELECTION DISTRICT:

Carrsville

LOCATION:

The project is located on properties zoned Rural Agricultural Conservation (RAC) on Burwells Bay Road, Jones Drive, Mill Swamp Road, and Pons Road.

BACKGROUND:

An application has been filed by Cavalier Solar A, LLC, applicant, for approval of a Conditional Use Permit, to construct and operate a major utility service use consisting of a utility-scale, solar energy (generation) facility, including related equipment, electrical lines, project substation, and 500 kV gen-tie transmission line connecting the proposed project substation to the existing Septa substation located at 10469 Mill Swamp Road. The project is located on properties zoned Rural Agricultural Conservation (RAC) on Burwells Bay Road, Jones Drive, Mill Swamp Road, and Pons Road. The parcels involved in this request are Tax Parcel Numbers 10-01-017, 10-01-020, 10-01-021, 10-01-023, 10-01-024, 10-01-027, 10-01-030, 11-01-005, 11-01-015, and Surry County Tax Parcel ID 60-1-1.

DESCRIPTION:

The Moonlight Agricultural/Forestal District was originally created on September 20, 2012 for a period of ten (10) years and presently contains 12,765 acres of land.

The purpose of the district is to encourage the maintenance of farming and forestry, protect farming and forestry practices and provide for the lands being used for agricultural or forestal production to automatically qualify for agricultural or forestal use-value assessment. Agricultural and Forestal Districts are created to conserve and protect and to encourage the development and improvement of the Commonwealth's agricultural and forestal land for the production of food and other agricultural and forestal product. These lands are protected as valued natural and ecological resources, which provide essential open spaces for clean air sheds, watershed protection, and wildlife habitat, as well as for aesthetic purposes.

CODE REQUIREMENTS:

This request is for the withdrawal of approximately 646 acres of land from the district pursuant to the following:

> (A) At any time after the creation of a district within any locality, any owner of land lying in such district may file with the locality a written request to withdraw all or part of his land from the district for good and reasonable cause. The program administrator shall refer the request to the advisory committee for its recommendation. The advisory committee shall make recommendation concerning the request to withdraw to the local Planning Commission, which shall hold a public hearing and make recommendation to the local governing body. Land proposed to be withdrawn may be reevaluated through the Virginia or local Land Evaluation and Site Assessment (LESA) System. The landowner seeking to withdraw land from a district, if denied favorable action by the governing body, shall have an immediate right of appeal de novo to the circuit court serving the territory wherein the district is located. This section shall in no way affect the ability of an owner to withdraw an application for a proposed district or withdraw from a district pursuant to clause (v) of subdivision 1 of § 15.2-4307 or § 15.2-4311.
>
> (B) Upon termination of a district or withdrawal or removal of any land from a district created pursuant to this chapter, land that is no longer part of a district shall be subject to and liable for roll-back taxes as are provided in § 58.1-3237. Sale or gift of a portion of land in a district to a member of the immediate family as defined in § 15.2-2244 shall not in and of itself constitute a withdrawal or removal of any of the land from a district.
>
> (C) Upon termination of a district or upon withdrawal or removal of any land from a district, land that is no longer part of a district shall be subject to those local laws and ordinances prohibited by the provisions of subsection B of § 15.2-4312.

COMPREHENSIVE LAND USE PLAN:

The properties associated with this district are located in the Rural Agricultural Conservation (RAC) District, as designated in the Comprehensive Plan. The RAC designation is intended to maintain and conserve rural character and farmlands. This designation is intended to provide for a full range of agricultural and farming activities and related uses along with some low-density residential development.

STAFF CONCLUSION:

The request is in keeping with County Codes and Ordinances and does not negatively impact the integrity of the District. The request is being scheduled for the February 23, 2021 Planning Commission meeting for consideration and recommendation to the Board of Supervisors.

ATTACHMENTS:

- Request
- Maps

January 14, 2021

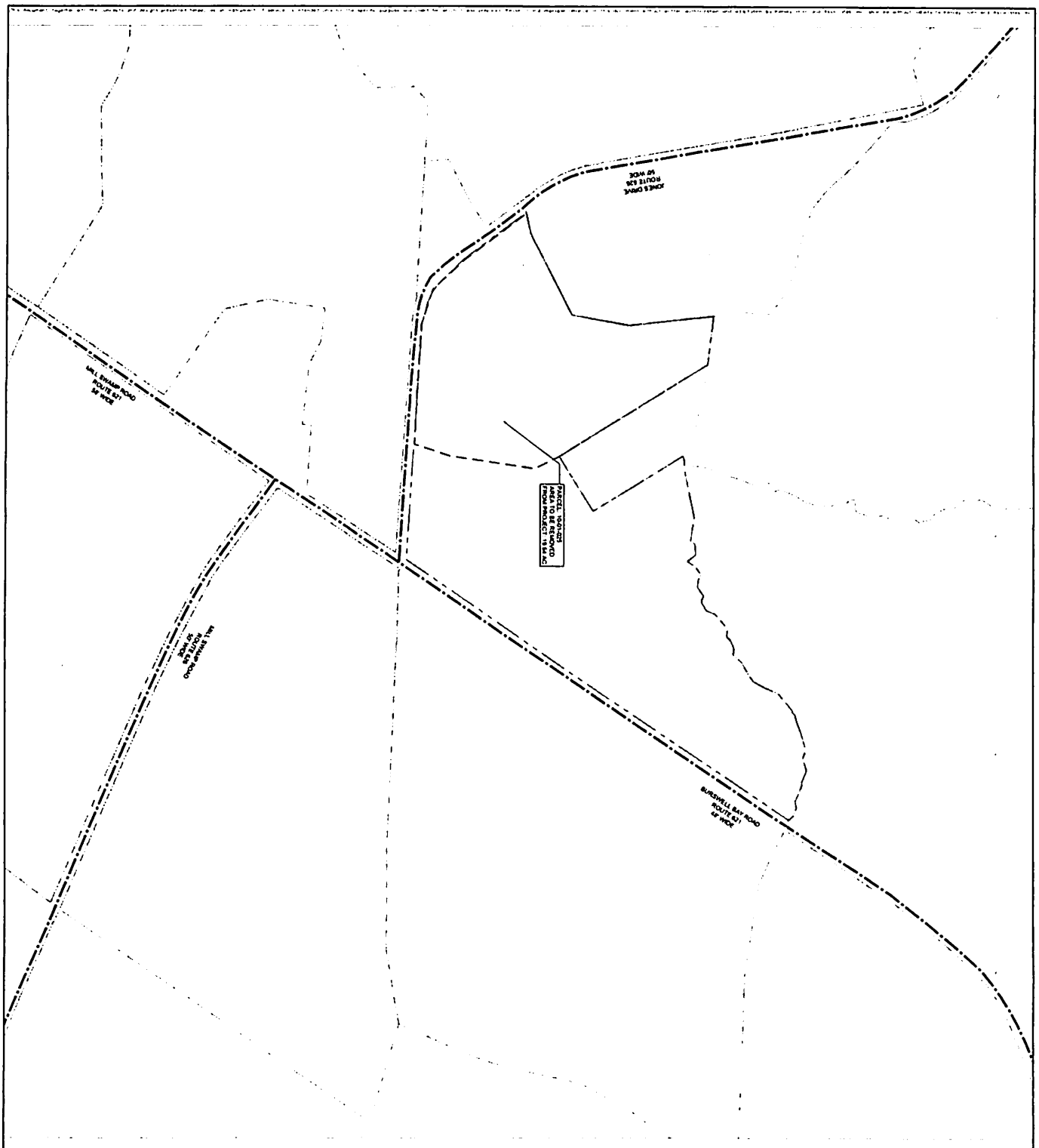
Petition to the Isle of Wight Board of Supervisors:

As allowed under Virginia Code § 15.2-4314, I, the undersigned owner consent to apply to Isle of Wight County to withdraw our properties or a portion of our properties as identified by Tax Parcel ID below and as illustrated on the attached exhibit from the Moonlight Agricultural/Forestal District for the purposes of the conditional use permit application by Cavalier Solar A, LLC to establish a utility-scale solar facility and related equipment thereon.

PARCEL ID	*Total Parcel Area (ac)*	*Total Area to be Withdrawn (ac)*
10-01-025	50.70	19.54

Jean E. Barcroft

Jean E. Barcroft
1-14-2021



BARCROFT PARCELS		
PARCEL ID	TOTAL AREA (ACRES, +/- 10 QUARTER)	AREA TO BE WITHDRAWN FROM PROJECT (ACRES)
1621-1625	30.76	19.54

CAVALIER SOLAR
PREPARED FOR
S-POWER

EXHIBIT B - BARCROFT PARCEL

KHA PROJECT
DATE 01/12/2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY SAH

NOT FOR CONSTRUCTION

Kimley»Horn
© 2020 KIMLEY-HORN AND ASSOCIATES, INC
11400 COMMERCE PARK DR., SUITE 400
RESTON, VA 20191
PHONE: 703-674-1300

S·POWER
An AES and AIMCo Company
2180 SOUTH 1300 EAST, SUITE 800
SALT LAKE CITY, UT 84106
PHONE: 801-679-3500 FAX: 801-679-3501

SHEET NUMBER
EX-02

January 14, 2021

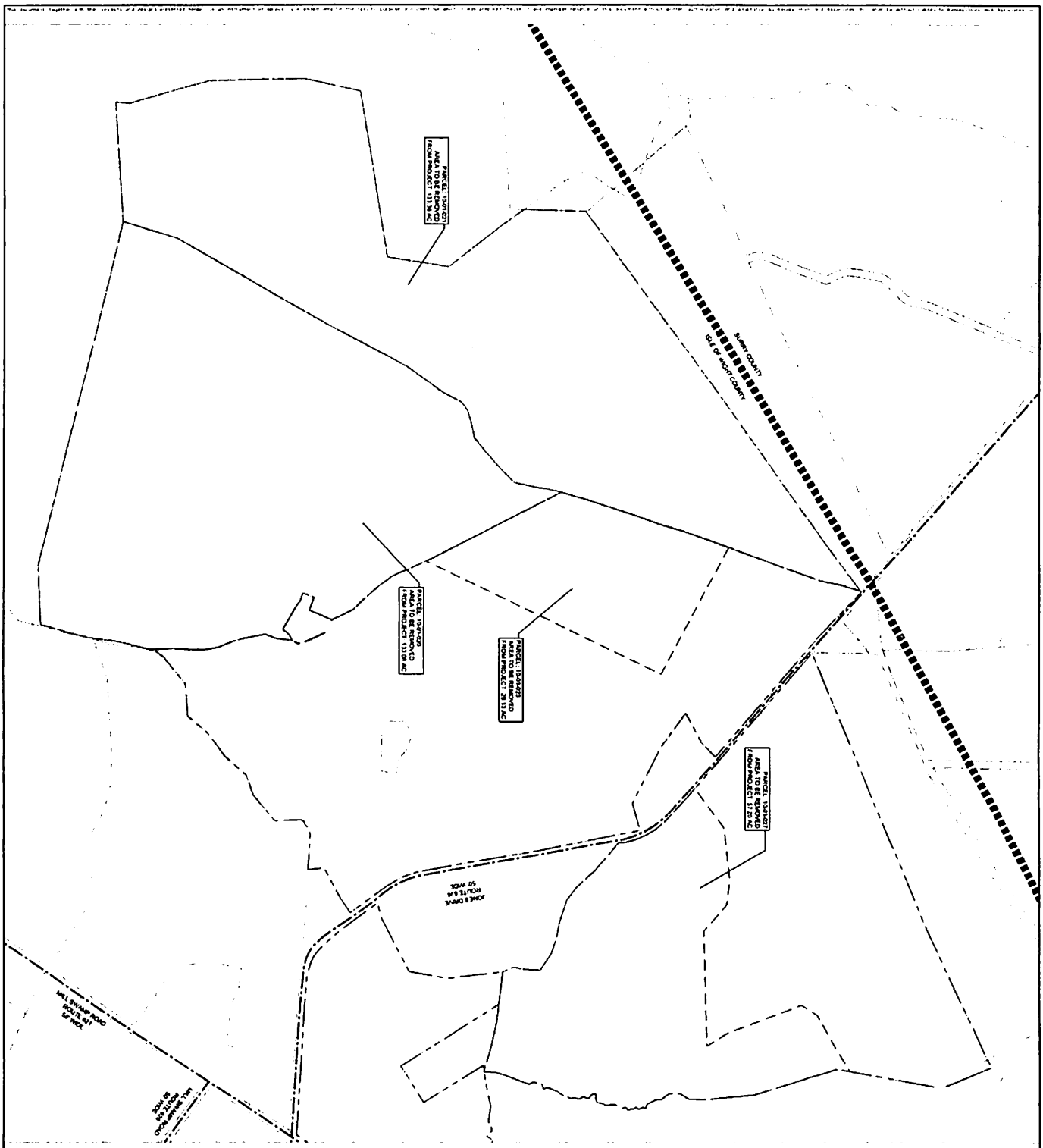
Petition to the Isle of Wight Board of Supervisors:

As allowed under Virginia Code § 15.2-4314, we the undersigned owners consent to apply to Isle of Wight County to withdraw our properties or a portion of our properties as identified by Tax Parcel ID below and as illustrated on the attached exhibit from the Moonlight Agricultural/Forestal District for the purposes of the conditional use permit application by Cavalier Solar A, LLC to establish a utility-scale solar facility and related equipment thereon.

PARCEL ID	*Total Parcel Area (ac)*	*Total Area to be Withdrawn (ac)*
10-01-020	133.08	133.08
10-01-021	133.36	133.36
10-01-023	156.98	29.13
10-01-027	125.61	57.20

Michael Seward

Emily Seward



PARCEL ID	MICHAEL SEWARD PARCELS	
	TOTAL AREA (ACRES) AS SURVEYED	AREA TO BE WITHDRAWN FROM PROJECT (ACRES)
104(1)-(2)	133.96	133.96
104(1)-(27)	156.98	25.13
104(1)-(27)	133.96	133.96
104(1)-(27)	27.20	27.20

LEGEND

- MICHAEL SEWARD PARCELS
- ADJACENT PROJECT PARCELS
- NON-PARTICIPATING PARCELS
- PUBLIC RIGHT OF WAY
- AREAS OF PARCELS TO BE WITHDRAWN
- COUNTY BOUNDARY

NORTH

GRAPHIC SCALE IN FEET
0 150 300 600

SHEET NUMBER
EX-01

CAVALIER SOLAR
PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

EXHIBIT A - MICHAEL SEWARD PARCELS

KHA PROJECT

DATE 01/12/2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY SAH
CHECKED BY SMM

NOT FOR CONSTRUCTION

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SALT LAKE CITY, UT 84106
PHONE 801-679-3500 FAX 801-679-3501
WWW.SPOWER.COM

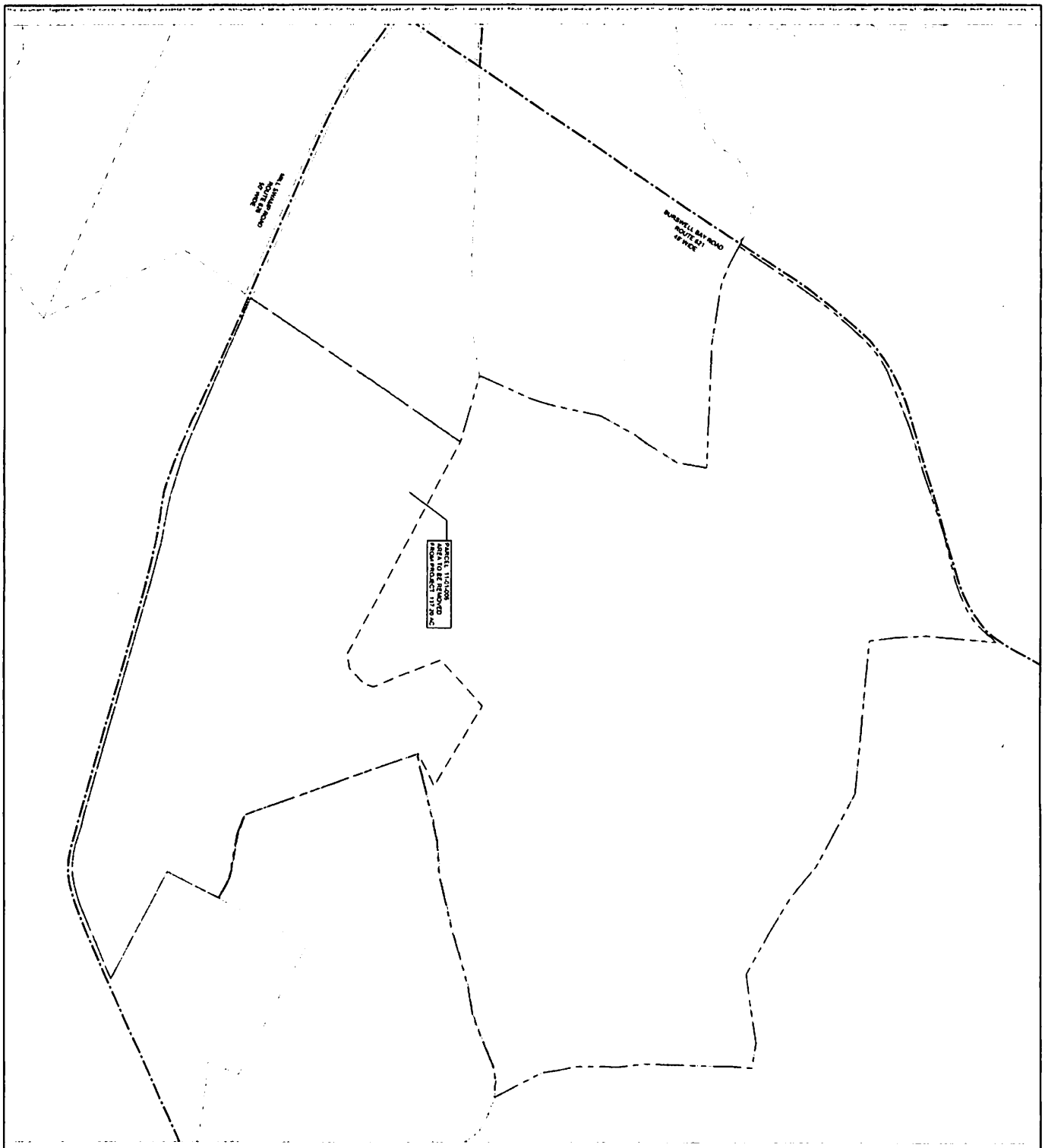
January 14, 2021

Petition to the Isle of Wight Board of Supervisors:

As allowed under Virginia Code § 15.2-4314, we the undersigned owners consent to apply to Isle of Wight County to withdraw our properties or a portion of our properties as identified by Tax Parcel ID below and as illustrated on the attached exhibit from the Moonlight Agricultural/Forestal District for the purposes of the conditional use permit application by Cavalier Solar A, LLC to establish a utility-scale solar facility and related equipment thereon.

PARCEL ID	*Total Parcel Area (ac)*	*Total Area to be Withdrawn (ac)*
11-01-005	437.89	137.20

476 LLC (Authorized Signatory – Dick Ashe) DR Ashe



SHEET NUMBER
EX-03

CAVALIER SOLAR
PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

EXHIBIT C - 476 PARCEL

KHA PROJECT	
DATE	01/12/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAH
CHECKED BY	SMM

NOT FOR CONSTRUCTION

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2180 SOUTH 1300 EAST, SUITE 600
SALT LAKE CITY, UT 84106
PHONE 801-679-3500 FAX 801-679-3501

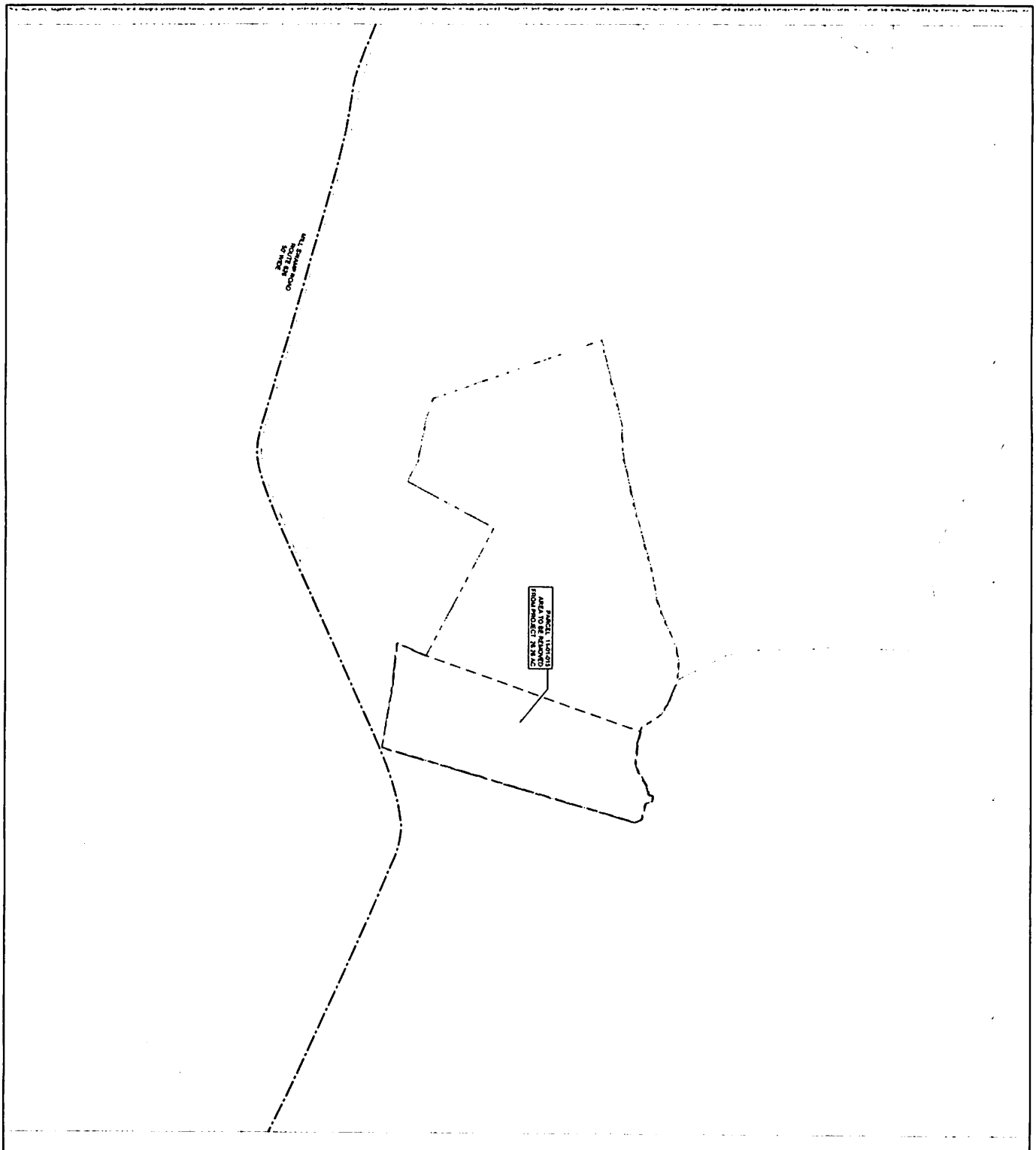
January 14, 2021

Petition to the Isle of Wight Board of Supervisors:

As allowed under Virginia Code § 15.2-4314, we the undersigned owners consent to apply to Isle of Wight County to withdraw our properties or a portion of our properties as identified by Tax Parcel ID below and as illustrated on the attached exhibit from the Moonlight Agricultural/Forestal District for the purposes of the conditional use permit application by Cavalier Solar A, LLC to establish a utility-scale solar facility and related equipment thereon.

PARCEL ID	*Total Parcel Area (ac)*	*Total Area to be Withdrawn (ac)*
11-01-015	437.89	137.20

MITCHELL DELK BATTEN Mitchell Delk Batten



BATTEN PARCEL	
PARCEL ID	TOTAL AREA (ACRES) AS SURVEYED
117-(1)-25	417.88

AREA TO BE WITHDRAWN FROM PROJECT (ACRES)	137.20

LEGEND

- BATTEN PARCEL
- ADJACENT PROJECT PARCELS
- NON-PARTICIPATING PARCELS
- PUBLIC RIGHT OF WAY
- AREAS OF PARCELS TO BE WITHDRAWN

NORTH

GRAPHIC SCALE IN FEET
0 150 300 600

SHEET NUMBER
EX-04

CAVALIER SOLAR
PREPARED FOR
S-POWER

ISLE OF WIGHT COUNTY VIRGINIA

EXHIBIT D - BATTEN PARCEL

KHA PROJECT

DATE	01/12/2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	SAM
CHECKED BY	SMM

NOT FOR CONSTRUCTION

Kimley»Horn
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11400 COMMERCE PARK DR., SUITE 400
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SALT LAKE CITY, UT 84106
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Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

DEPARTMENT OF ECONOMIC DEVELOPMENT

MEMORANDUM

February 17, 2021

TO: **Members, Isle of Wight County Planning Commission**

FROM: **Amy Ring, Planning and Zoning Director**

SUBJECT: **Updated Economic Impacts – Conversion of Agriculture to Solar Facilities**

This memo updates the original August 2019 memorandum which responded to a request by the Planning Commission at its regular meeting on July 23, 2019, for County Staff to provide additional economic impact information associated with the Windsor PV1 Solar Farm Conditional Use Permit (CUP) application. Staff revised the following analysis based on the proposed Cavalier Solar project.

More particularly, the request is related to the desire to understand the impacts of potential conversion of agricultural and silviculture land uses to solar farm land use beyond tax revenue benefits to the County. It should be noted that staff has prepared this limited analysis based on readily-available data and information provided by the land owners, and that an extensive econometric analysis would require the assistance of an external consultant.

Impacts associated with conversions to solar certainly do exist and should be understood to the extent possible. Staff has investigated these potential impacts with the assistance of Federal, state and local resources, including USDA, Farm Service Agency, Virginia Cooperative Extension and the Isle of Wight Commissioner of Revenue, to name a few.

The Cavalier Solar Project is the fifth solar project proposed in the County. Below is a table with a summary of the County's existing solar projects, with "Land in Farms" representing the USDA's definition, which includes cropland, pastureland, wood lots and timber tracts.

PROJECT	ACRES IN PANELS	LOCATION	% OF COUNTY LAND IN FARMS
Woodland	180 +/-	Longview	0.2%
Solidago	170 +/-	Redhouse	0.2%
Ho-Fel	330 +/-	Lees Mill	0.4%
Windsor PV1	630 +/-	Windsor	0.8%
Cavalier	450 +/-	Isle of Wight	0.6%
TOTAL	**1,760 +/-**		**2.2%**

According to the 2017 Census of Agriculture (USDA-NASS), Isle of Wight County has 237 farms totaling 80,672 acres of land. The average farm size is 340 acres. The average annual market value of agriculture products sold per farm is $270,985.

Using the same data to derive market values for crops cultivated from 268 acres of farmland on an example farm generates an estimated $214,078 in market value. Additional property includes 790 acres in active timber. The current market rate for timber ranges from $1,000 to $3,000 per acre depending on size of trees, species composition and the land itself. For loblolly pine, the current industry standard is to clear cut and replant at 18-20 years.

According to the USDA – NASS, 2017, the average rental rate for County farmland in tax year 2018 was $69.00 per acre. One of the subject farms is currently generating $110 per acre, and the other $100 per acre. By contrast, market rates for solar leases in the region are between $600 and $1,000 per acre.

Land and Equipment Valuation

The Office of the Commissioner of Revenue values various land uses differently based on the following categories:

- Agriculture/Horticulture - $1,238
- Pasture - $334
- Non-productive - $240
- Forest - $641
- Non-productive (swamp/marsh) - $100

Parcels hosting a solar farm are currently assessed at $15,000 per acre. The final assessment and tax revenue generated by a parcel's conversion to solar facility usage depends on the proportion of each of the uses after the conversion. In other words, the Commissioner of Revenue derives a tax levy composed of assessments on the differing uses allowed by the conditional use permit. In the case of the Cavalier project, uses will include some agricultural and silvicultural use after the conversion to solar. The rate of $15,000 per acre would apply only to 450 acres.

As for tax revenues derived from solar facilities and equipment, because the proposed project will exceed 20 MW of output, that type of property receives an 80 percent exemption on initial and depreciated values as per State law. In addition, because the proposed project exceeds 25 MW, the facility and equipment will be assessed by the State Corporation Commission (SCC) using a sliding scale depreciation method. The SCC then applies the County's real estate sales ratio to the assessed value to determine the final assessment. The sales ratio is determined annually by the Department of Taxation based on the sales price compared to the assessment for each real estate sale in Isle of Wight County. The final assessment is sent to the Commissioner's office in September, and the real estate tax rate is applied to the assessment to determine the actual tax

for the following year. Therefore, precise revenue predictions are not available until both the sales ratio factor and the per acre tax rate are both known.

EXAMPLE – Windsor PV1:

Real Estate Tax Revenue – Current Land Use Program[1]

Parcel	Annual RE Tax	30 Yr. Revenue (PV)
52-01-046	$4,160	$124,797
Parcel	**Annual RE Tax**	**30 Yr. Revenue (PV)**
53-01-007	$6,443	$193,290

Total Annual Tax Revenue is $10,603, which over 30 years totals $318,087.

Real Estate Tax Revenue – Proposed Land Use Program + Solar Facility

Parcel	Annual RE Tax	30 Yr. Revenue (PV)
52-01-046	$46,536	$1,396,077
Parcel	**Annual RE Tax**	**30 Yr. Revenue (PV)**
53-01-007	$39,728	$1,191,831

Total Annual Tax Revenue is $86,264, which over 30 years totals $2,587,908. (Please see attachment for detail.)

Economic Impacts

When assessing conversion of agricultural land to solar facility usage, the following potential direct and indirect impacts to the agriculture and silviculture industries can occur:

- The current 80 percent machinery and tools tax exemption for facilities generating 20 MW or greater will continue to create demand in rural communities for large tracts of land to be converted to solar use. This engenders natural competition between green energy and food and fiber production in the marketplace.
- Currently, agriculture and silviculture are two of the County's top industries. The proposed Cavalier solar project represents a subtraction of approximately 0.6 percent of the County's cultivated land (USDA-NASS, 2017). While this project represents a relatively small impact, longer-term cumulative land conversions could create adverse effects on the local agricultural industry.
- To the extent that farmers purchase goods and services locally, associated direct and indirect adverse impacts would be realized.
- Irrespective of the origin of purchase, data provided by the Virginia Cooperative Extension is useful for understanding a farmer's costs per acre for different crops:
    - Corn = $395.47

[1] The revenue figures specific to the Cavalier Solar Project are provided on Page 2 of the Economic Impact Assessment (Exhibit K) of the Project Narrative.

    - Soybeans = $271.65
    - Cotton = $839.57

- Examples of goods and services purchased:
    - Seed
    - Fertilizers
    - Herbicides/Insecticides
    - Fuel/Oil/Lube
    - Repairs
    - Labor
    - Insurance
- The construction of solar projects creates temporary demand for skilled and unskilled labor, some of which could be sourced locally or regionally, bringing new economic benefits to the community's ancillary sectors, such as temporary housing, food service, and entertainment.
- Property owners who lease their land to solar energy developers, such as those associated with the Cavalier project, can realize a reliable, long-term income stream for their land, with the potential to return to agriculture or silviculture use at the end of the lease period.

Rural localities will continue to grapple with the apparent high demand for utility-scale solar conversions if upward pressure to supply the grid with solar-derived energy does not wane. It is difficult to predict the future at this stage; however, staff is hopeful that this limited analysis is useful to understanding the broader economic picture and informs future policy discussions connected with this matter.

ORDINANCE NUMBER _____

AN ORDINANCE TO APPROVE A CONDITIONAL USE PERMIT FOR A MAJOR UTILIITY SERVICE ON PROPERTIES ZONED RURAL AGRICULTURAL CONSERVATION (RAC) LOCATED ON BURWELLS BAY ROAD, JONES DRIVE, MILL SWAMP ROAD, AND PONS ROAD, INCLUDING ALL OR PART OF TAX PARCEL NUMBERS 10-01-017, 10-01-020, 10-01-021, 10-01-023, 10-01-024, 10-01-025, 10-01-027, 10-01-030, 11-01-005, AND 11-01-015 AS SPECIFIED IN APPLICATION CUP-03-19 FOR THE PURPOSES OF ESTABLISHING A 240 MW UTILITY SCALE SOLAR ENERGY PRODUCTION FACILITY

WHEREAS, Cavalier Solar A, LLC, applicant, has requested approval of a conditional use permit with application number CUP-03-19 for certain tracts of land with tax parcel numbers 10-01-17, 10-01-020, 10-01-021, 10-01-023, 10-01-024, 10-01-025, 10-01-027, 10-01-030, 11-01-005, and 11-01-015, which land is depicted on Exhibit "B"; and,

WHEREAS, the procedural requirements of Appendix B, Zoning Ordinance, of the Code of Isle of Wight County, Virginia, 2005 (as amended), have been followed; and,

WHEREAS, in acting upon this request, the Planning Commission and Board of Supervisors have considered the matters enunciated in Section 15.2-2284 of the Code of Virginia (1950), as amended, and Section 1-1017 of the Isle of Wight County Zoning Ordinance with respect to the purposes stated in Code of Virginia (1950), as amended, Section 15.2-2200 and 15.2 2283; and,

WHEREAS, the Planning Commission has made a recommendation as stated in Exhibit "A;"

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors of Isle of Wight County, Virginia, that:

Section 1. Exhibits.

Exhibit "A", "Planning Commission Recommendation," Exhibit "B", "Property Map," and Exhibit "C," "Conditions," which are attached hereto, are hereby incorporated as part of this ordinance.

Section 2. Findings.

The Board of Supervisors finds that the proposal for conditional use permit CUP-03-19, as submitted or modified with conditions herein, the expressed purpose of which is to permit a major utility service to establish a 240 MW utility scale solar energy production facility, is in conformity with the standards of the Isle of Wight County Zoning Ordinance, and that it will have no more adverse effects on the health, safety or comfort of persons living or working in or driving through the neighborhood, and will be no more injurious to property or improvements in the neighborhood than would any other use generally permitted in the same district, taking into consideration the location, type and height of buildings or structures, the type and extent of landscaping and screening on site and whether the use is consistent with any theme, action, policy or map of the Comprehensive Plan with the conditions set forth below in Exhibit C.

These findings are based upon the consideration for the existing use and character of the property, the Comprehensive Plan, the suitability of the property for various uses, the trends of growth or

change, the current and future requirements of the community as to land for various purposes as determined by population and economic studies and other studies, the transportation requirements of the community, the requirements of airports, housing, schools, parks, playgrounds, recreation areas and other public services, the conservation of natural resources, the preservation floodplains, the preservation of agricultural and forestal land, the conservation of properties and their values, and the encouragement of the most appropriate use of land throughout the County.

These findings are based upon a determination that most reasonable and limited way of avoiding the adverse impacts of a utility scale solar energy production facility on the aforesaid properties is by the imposition of the conditions provided herein in Exhibit "C."

Section 3. Permit Granted.

The conditional use permit for the property be, and is hereby approved for the property, subject to the attached conditions and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a 240 MW utility scale solar energy production facility in compliance with the County Zoning Ordinance.

Section 4. Severability.

It is the intention of the Board of Supervisors that the provisions, sections, paragraphs, sentences, clauses, and phrases of this ordinance are severable; and if any phrase, clause, sentence, paragraph, section, and provision of this ordinance hereby adopted shall be declared unconstitutional or otherwise invalid by the valid judgement or decree of a court of competent jurisdiction, such unconstitutionality or invalidity shall not affect any of the remaining phrase, clauses, sentences, paragraphs, sections, and provisions of this ordinance, to the extent that they can be enforced notwithstanding such determination.

Section 5. Effective Date

This ordinance shall be effective upon passage and shall not be published or codified. The conditional use authorized by this permit shall be implemented within two (2) years from that date of approval by the Board of Supervisors and shall terminate if not initiated within that time period.

This ordinance shall be effective upon passage and shall not be published or codified.

DATE: _____

READ AND PASSED: _____
Chairman, Board of Supervisors

TESTE: _____
Clerk, Board of Supervisors

Approved as to Form:

_____

Robert W. Jones Jr, County Attorney

Exhibit A

RESOLUTION NUMBER PC-21-01

ISLE OF WIGHT COUNTY PLANNING COMMISSION

A RESOLUTION TO PRESENT A REPORT AND RECOMMENDATION TO THE BOARD OF SUPERVISORS ON THE REQUEST FOR APPROVAL OF A CONDITIONAL USE PERMIT, CUP-03-19, TO ALLOW FOR A MAJOR UTILITY SERVICE (UTILITY-SCALE SOLAR ENERGY FACILITY) ON PROPERTIES LOCATED ON MILL SWAMP ROAD, BURWELLS BAY ROAD, AND JONES DRIVE, TAX MAP PARCELS 10-01-017, 10-01-020, 10-01-021, 10-01-023, 10-01-024, 10-01-025, 10-01-027, 10-01-030, 11-01-005, AND 11-01-015.

WHEREAS, Cavalier Solar A, LLC, applicant, has requested approval of a conditional use permit, CUP-03-19; and

WHEREAS, the applicant has requested the conditional use permit for certain tracts of land having tax parcel numbers 10-01-017, 10-01-020, 10-01-021, 10-01-023, 10-01-024, 10-01-025, 10-01-027, 10-01-030, 11-01-005, and 11-01-015 situated in Isle of Wight County; and

WHEREAS, the specific request is to permit a utility-scale solar energy facility, which is considered a major utility service and conditional use in the Rural Agricultural Conservation (RAC) District in which the properties are located in accordance with sections 3-4000 and 4-2003 of the Zoning Ordinance;

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of Isle of Wight County, that:

Section 1. Findings.

The Planning Commission finds that the proposal for a conditional use permit, as submitted or modified herein:

___a. Will have no adverse effects on the health, safety or comfort of persons living or working in or driving through the neighborhood,

___b. Will have more adverse effects on the health, safety or comfort of persons living or working in or driving through the neighborhood,

___c. Will be no more injurious to property or improvements in the neighborhood, or

___d. Will be more injurious to property or improvements in the neighborhood that would any other use generally permitted in the same district, taking into consideration the location, type and height of buildings or structures, the type and extent of landscaping and screening on site and whether the use is consistent with any theme, action, policy or map of the Comprehensive Plan which encourages mixed uses and/or densities.

Section 2. Recommendation to Board of Supervisors.

The Planning Commission recommends to the Board of Supervisors that the request, CUP-03-19, be:

___ a. Granted as submitted, and that the Board of Supervisors adopt the proposed Ordinance without modification.

___b. Denied, and that Board of Supervisors does not adopt the proposed Ordinance.

___c. Granted with the modifications set forth on the attached listing of specific recommended conditions, and that the Board of Supervisors adopt the proposed Ordinance with such modifications.

DATE: _____

READ AND PASSED: _____
Chairman, Isle of Wight County Planning Commission

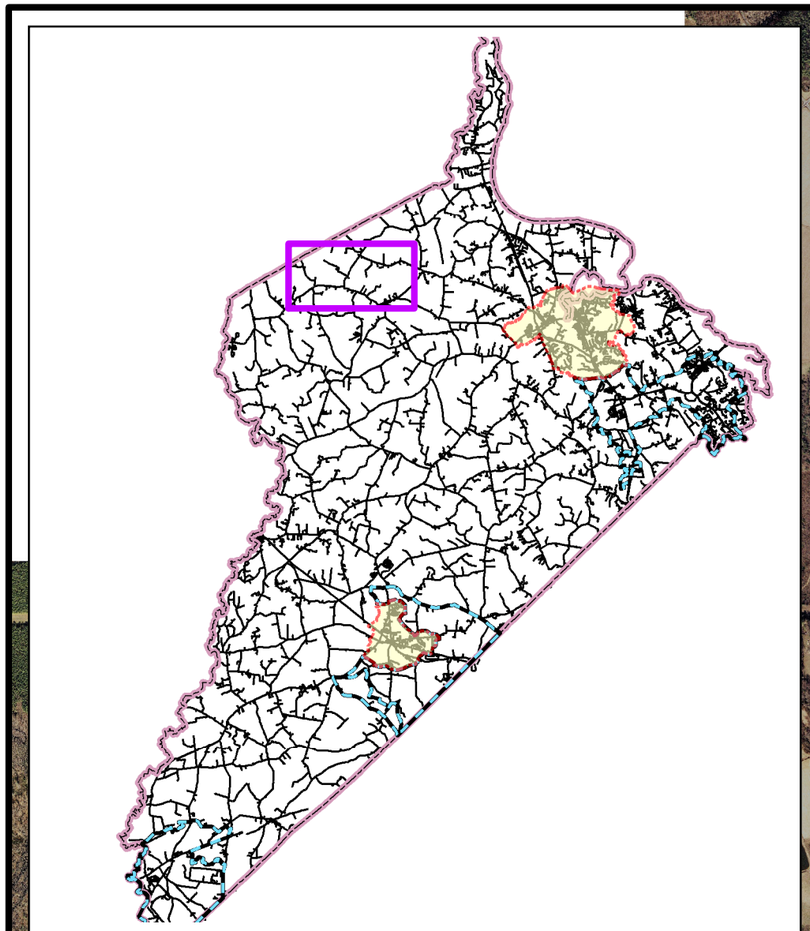
TESTE: _____
Secretary, Isle of Wight County Planning Commission

Approved as to Form:

_____
Robert W. Jones, Jr., County Attorney

Cavalier Solar Conditional Use Permit - Property Map (Exhibit B)

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA



N

Isle of Wight - Surry Co. Boundary

CAVALIER SOLAR Parcels

JONES DRIVE

10-01-027

BURWELLS BAY ROAD

10-01-021

10-01-023

DRIVEWAY

10-01-025

10-01-025

11-01-005

10-01-020

DRIVEWAY

10-01-024

10-01-030

11-01-015

60-1-1

MILL SWAMP ROAD

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

DRIVEWAY

PONS ROAD

10-01-017

JAMES WILSON WAY

Legend

- Road Center Lines
- Towns
- Development Service Districts
- Parcels
- Rivers & Lakes
- County Boundary

0 1,000 2,000 Feet

Cavalier Solar Conditional Use Permit (CUP-03-19)

EXHIBIT C: Conditions

The Planning Commission forwarded to the Board of Supervisors a recommendation for approval of the conditional use permit for Cavalier Solar (CUP-3-19) subject to the following conditions:

1) The subject properties shall be developed in general conformance with the approved site plan prepared by Kimley-Horn and Associates, Inc. dated February 2, 2021 for up to five hundred (500) total acres.
2) The portion of the subject properties supporting solar panels shall be enclosed by security fencing of a type which is harmonious with the rural, agricultural, and historical character of the County as determined by the Zoning Administrator upon approval of the site plan for the project.
3) The applicant shall preserve and maintain existing forest and vegetation within required setback areas and buffer yards and shall not clear or cut live trees within required setbacks or buffer yards without written authorization from the Zoning Administrator.
4) A continuous screening zone at least seventy-five (75) feet in width shall be established surrounding the project electrical substation. Existing live trees and vegetation shall be preserved within the screening zone, provided that breaks for required access, and for overhead and underground transmission lines, shall be permitted to interrupt the contiguousness of the zone with approval by the Zoning Administrator.
5) The applicant shall submit an Emergency Response Plan with the first submission of the site plan, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided, at the discretion of the County, to County emergency response staff with regards to safety for on-site emergency response. The applicant shall install a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise and include plans for the same on the project site plan.
6) The applicant shall conserve topsoil on the site to the maximum extent feasible. Topsoil stockpiled on the site shall be stored out of view from adjacent properties and public roads.
7) Hours of operation for construction activities shall be limited to 7:00 A.M. to 7:00 P.M. Monday through Friday and 9:00 A.M. to 7:00 P.M on Saturdays. No construction shall occur on Sundays.

ISSUE:

Resolution to Amend the FY21 Budget and Appropriate Funding for a Medic Unit ($222,595)

BACKGROUND:

A change in the timing of Rescue vehicle replacement is being requested to take advantage of grant and contribution funding. An additional cost of $10,000 per vehicle is also being requested. A resolution is needed to amend the FY21 budget and appropriate funding in the amount of $222,595.

Isle of Wight County provides Capital Improvement Project (CIP) funds to purchase ambulances in the county. Isle of Wight County has provided for the purchase of a rescue vehicle each fiscal year FY21, FY22 and FY23 at a cost of $225,000 per vehicle. An additional $10,000 per vehicle is being requested due to the increased cost to purchase rescue vehicles. The full cost of the FY21 vehicle was scheduled to be $225,000. The final cost of the vehicle is $239,637 which is funded from a grant recently received ($96,500), county CIP funds ($138,500 originally scheduled to be $225,000) and IOWR contribution ($4,637). The funds are provided from the above sources however a total budget increase of $10,000 is needed for the $235,000 total vehicle contribution request. The additional $4,637 IOWR contribution for this vehicle was previously appropriated.

Additionally, the $96,500 savings on the FY21 purchase made possible through the grant is being requested to be applied to the scheduled FY23 vehicle to be purchased in the current year. To fund the vehicle in the current year, the grant savings of $96,500 would be applied to the second vehicle and a contribution from the Isle of Wight Rescue department in the amount of $116,095 has been committed. This purchase will remove the Rescue vehicle from the CIP FY23 requested funding. Due to the grant and the contribution from the IOWR, the County will potentially save $235,000 with this change. A budget increase of $212,595 is needed to purchase the vehicle in the current year using the above funding sources.

BUDGETARY IMPACT:

Adoption of the attached resolution will increase the FY21 Capital Project Fund budget by $222,595 using $96,500 of previously assigned bond funds, $10,000 of fund balance and $118,500 contribution from IOWR. The FY22 CIP request will increase $10,000 for the expected additional cost of the ambulance purchase. The

FY23 CIP budget request will decrease $225,000.

RECOMMENDATION:

Adopt a resolution to amend the FY21 budget and appropriate funding for a medic unit.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/10/2021

RESOLUTION TO AMEND THE FY 2020-2021 BUDGET AND APPROPRIATE FUNDING FOR AMBULANCE PURCHASES FOR ISLE OF WIGHT VOLUNTEER RESCUE

WHEREAS, the Board of Supervisors has approved funding for the purchase of an ambulance for the Isle of Wight Volunteer Rescue Squad in the amount of $225,000 in FY 2021 and $225,000 proposed for FY 2023; and,

WHEREAS, the selected, equipped vehicle exceeds the budgeted FY 2021 appropriation by $10,000 and a request has been made to fund the FY 2023 vehicle in FY 2021; and,

WHEREAS, the Isle of Wight Volunteer Rescue Squad has agreed to issue a check to Isle of Wight County for $118,500 and funds in the amount of $96,500 was made available through grant funding in FY 2021; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2020-2021 Capital Project Fund Budget of $222,595 for the additional funds of $116,095 from the Isle of Wight Volunteer Rescue Squad, $96,500 of available bond funds, and $10,000 of assigned fund balance for the ambulance purchases; and,

WHEREAS, the Board of Supervisors needs to appropriate $222,595 for the purchase of the ambulances in FY 2020-2021.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that the FY 2020-2021 budget is hereby amended, and funds appropriated in the amount of two hundred twenty two thousand five hundred ninety five dollars ($222,595) for the additional cost of the ambulance purchases.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May 2021.

_____

Richard L. Grice, Chairman

_____

Carey Mills-Storm, Clerk

Approved as to form:

_____

Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Adopt Chapter 1: Personnel, Article III, Section 3.12 of the County Policy Manual

BACKGROUND:

Staff has previously discussed with the Board a proposal to establish an annual payment to eligible employees based on an employee's continuous service with the County in an effort to incentivize longevity.

BUDGETARY IMPACT:

Funding for the proposed longevity pay is included in the adopted FY2021-22 operating budget.

RECOMMENDATION:

Adopt a resolution to adopt Chapter 1: Personnel, Article III, Section 3.12 of the County Policy Manual.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/14/2021

RESOLUTION TO ADOPT CHAPTER 1: PERSONNEL, ARTICLE III, SECTION 3.12 OF THE COUNTY POLICY MANUAL

WHEREAS, the Board of Supervisors desires to establish an annual payment to eligible employees based on an employee's continuous service with the County; and,

WHEREAS, the Board of Supervisors desires to adopt Chapter 1: Personnel Article III, Section 3.12 in an effort to incentivize employment longevity.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that Chapter 1: Personnel Article III, Section 3.12 is amended as follows:

ARTICLE III
Compensation Plan

(Revised October 7, 1999, April 7, 2005, December 15, 2005, April 18, 2006, June 1, 2006, April 16, 2015, October 1, 2015, July 1, 2016, July 1, 2017, July 1, 2018, July 1, 2021)

Section 3.12
(Effective July 1, 2021)

Longevity pay is an annual payment based on an employee's full-time continuous service with the County. To be eligible, employees must be in a regular full-time status and completed the appropriate amount of continuous services by June 30th of each fiscal year. The eligible employee will receive the following lump sum amount in the month of November.

Years of Service	Amount
25 years or more	$1,000
20-24 years	$800
15-19 years	$600
10-14 years	$400
5-9 years	$250

Part-time employees that become full-time before July 1st and have continuous part time service will be credited half of the years of service. Longevity Pay is subject to

applicable taxes. Longevity Pay is not a part of annual base pay and an employee who terminates employment or is terminated shall not receive Longevity Pay.

Adopted this 20th day of May, 20201.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Authorize a Mid-Year Salary Adjustment

BACKGROUND:

At its meeting on May 13, 2021, the Board of Supervisors adopted its FY 2021-22 annual operating budget that includes funding for a mid-year salary adjustment for eligible full-time and part-time employees.

In order to effectuate the salary adjustments, the Board may wish to adopt a resolution to approve a one percent (1%) cost of living salary adjustment plus a $1,000 adjustment to the base salary for all full time employees and an adjustment of one percent (1) and forty eight cents ($0.48) to the base hourly rate for all regular part time employees is effective January 1, 2022.

BUDGETARY IMPACT:

Funding for the salary adjustments is included in the adopted FY 2021-22 operating budget.

RECOMMENDATION:

Adopt a resolution to authorize a mid-year salary adjustment.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution Letter	5/14/2021

RESOLUTION TO APPROVE THE COMPENSATION ADJUSTMENT FOR FISCAL YEAR 2021-2022

WHEREAS, in accordance with County Policy (Chapter 1: Personnel, Article II, Position Classification Plan and Article III, Compensation Plan), the Position Classification and Compensation Plan containing the Salary Schedule and Schematic List of Classes assigned to Salary Grades has been adopted in accordance with the Approved FY 2021-2022 Annual Operating Budget; and,

WHEREAS, a one percent (1%) cost of living salary adjustment and $1,000 adjustment to the base salary for all full-time employees, and an adjustment of one percent (1%) and forty eight cents ($0.48) to the base hourly rate for regular part-time employees, effective January 1, 2022 is recommended in accordance with the Approved FY 2021-2022 Annual Operating Budget.

NOW, THEREFORE, BE IT RESOLVED a one percent (1%) cost of living salary adjustment and $1,000 adjustment to the base salary for all full time employees and an adjustment of one percent (1) and forty eight cents ($0.48) to the base hourly rate for all regular part time employees is hereby provided effective January 1, 2022 in accordance with the Approved FY 2021-2022 Annual Operating Budget.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

ISSUE:

Resolution to Appropriate Funding for the Route 17 Bartlett Intersection Smart Scale Project ($53,000)

BACKGROUND:

The Board has previously expressed its desire for the Virginia Department of Transportation (VDOT) to provide significant improvements to the Bartlett Intersection. VDOT has approved a Smart Scale project for the intersection that would add a second exclusive northbound left-turn lane on U.S. Route 17 to address a heavy left-turning movement and mitigate the potential for queuing vehicles from impeding the through lane during peak period conditions, add a tapered left turn lane on U.S. Route 258 to enhance the transition of this heavy movement from eastbound U.S. Route 258/State Route 10/32 to southbound U.S. Route 17, provide a provision for a through lane on to "The Crossings" development, provide a left-turn lane on U.S. Route 17 to The Crossings development, and also provide much needed drainage and traffic signal improvements at the intersection.

VDOT has advised that there is a projected budget shortfall of $53,000 for the $5.2 million VDOT administered project and without the funding to cover the shortfall, the project cannot move forward.

BUDGETARY IMPACT:

Funding is currently available in the VDOT Local Match Reserve for Capital Projects to cover the $53,000 budget shortfall for the project.

RECOMMENDATION:

Adopt a resolution to appropriate funding to cover the budget shortfall for the Bartlett Intersection project. Authorize execution of the Bartlett Project Administration Agreement.

ATTACHMENTS:

Description	Type	Upload Date
Bartlett Project Administration Agreement	Backup Material	5/7/2021
Resolution	Resolution Letter	5/13/2021

ROUTING SLIP

From: Jamie Oliver, Transportation Manager

Subject: Bartlett Intersection-RTE 17 Project (UPC 109481)
VDOT Project Agreement (PAA) and Appendix A

Date: 4/23/2021

Enclosed for execution are three (3) copies of the VDOT project documents (PAA & Appendix A) for the Bartlett Intersection RTE. 17 project (UPC 109481).

This project will be administered by VDOT and is funded by Smart Scale (HB2) funds in the amount of $5,269,542. The project has a funding shortfall of $53,000 in which the County has agreed to pay from the VDOT local match funds available. The County will issue a check to VDOT for this amount upon execution of this agreement.

	Approval	Initial	Date
Tony Wilson, Department Head	Approved as to Content	TW	4-22-21
Stephanie Humphries, CFO	Funds Available	____	____
Robert Jones, Jr., County Attorney	Approved as to Form	____	____
Randy Keaton, County Administrator	Execution	____	____

Please return executed routing package to Julie Boswell, Public Works Department (x1654)

Certification of Funds:

I hereby certify that funds are available in ***the VDOT local match reserve account (31431040-599236).***

_____

Stephanie Humphries, Chief Financial Officer

VDOT ADMINISTERED – LOCALLY FUNDED
PROJECT ADMINISTRATION AGREEMENT

Project Number	UPC	Local Government
0017-046-683	109481	Isle of Wight County

THIS AGREEMENT, made and executed in triplicate this ____ day of _____, 20__, by and between the County of Isle of Wight, Virginia, hereinafter referred to as the LOCALITY and the Commonwealth of Virginia, Department of Transportation, hereinafter referred to as the DEPARTMENT. The DEPARTMENT and the LOCALITY are collectively referred to as the "Parties".

WITNESSETH

WHEREAS, the LOCALITY has expressed its desire to have the DEPARTMENT administer the work as described in Appendix B, and such work for each improvement shown is hereinafter referred to as the Project; and

WHEREAS, the funds as shown in Appendix A have all been allocated by the LOCALITY to finance the Project; and

WHEREAS, the LOCALITY has requested that the DEPARTMENT design and construct this project in accordance with the scope of work described in Appendix B, and the DEPARTMENT has agreed to perform such work; and

WHEREAS, both parties have concurred in the DEPARTMENT's administration of the project identified in this Agreement and its associated Appendices A and B in accordance with applicable federal, state, and local law and regulations; and

WHEREAS, the LOCALITY's governing body has, by resolution, which is attached hereto, authorized its designee to execute this Agreement; and

WHEREAS, Section 33.2-338 of the Code of Virginia authorizes both the DEPARTMENT and the LOCALITY to enter into this Agreement;

NOW THEREFORE, in consideration of the premises and mutual covenants and agreements contained herein, the parties hereto agree as follows:

A. The DEPARTMENT shall:

1. Complete said work as identified in Appendix B, advancing such diligently, and all work shall be completed in accordance with the schedule established by both parties.

2. Perform or have performed, and remit all payments for, all preliminary engineering, right-of-way acquisition, construction, contract administration, and inspection services activities for the project(s) as required.

3. Provide a summary of project expenditures to the LOCALITY for charges of actual DEPARTMENT cost.

4. Notify the LOCALITY of additional project expenses resulting from unanticipated circumstances and provide detailed estimates of additional costs associated with those circumstances. The DEPARTMENT will make all efforts to contact the LOCALITY prior to performing those activities.

5. Return any unexpended funds to the LOCALITY no later than 90 days after the project(s) have been completed and final expenses have been paid in full.

B. The LOCALITY shall:

1. Provide funds to the DEPARTMENT for Preliminary Engineering (PE) and Right-of-Way (ROW) upon execution of this Agreement and for Construction (CN) no less than 90 days prior to advertisement in the amounts shown in Appendix A.

2. Accept responsibility for any additional project costs resulting from unforeseeable circumstances, but only after concurrence of the LOCALITY and modification of this Agreement.

C. Funding by the LOCALITY shall be subject to annual appropriation or other lawful appropriation by the Board of Supervisors.

D. The Parties mutually agree and acknowledge, in entering this Agreement, that the individuals acting on behalf of the Parties are acting within the scope of their official authority and the Parties agree that neither Party will bring a suit or assert a claim against any official, officer, or employee of either party, in their individual or personal capacity for a breach or violation of the terms of this Agreement or to otherwise enforce the terms and conditions of this Agreement The foregoing notwithstanding, nothing in this subparagraph shall prevent the enforcement of the terms and conditions of this Agreement by or against either Party in a competent court of law.

E. The Parties mutually agree that no provision of this Agreement shall create in the public, or in any person or entity other than the Parties, rights as a third party beneficiary hereunder, or authorize any person or entity, not a party hereto, to maintain any action for, without limitation, personal injury, property damage, breach of contract, or return of money, or property, deposit(s), cancellation or forfeiture of bonds, financial instruments, pursuant to the terms of this Agreement or otherwise. Notwithstanding any other provision of this Agreement to the contrary, unless otherwise provided, the Parties agree that the LOCALITY or the DEPARTMENT shall not be bound by any agreements between either party and other persons or entities concerning any matter which is the subject of this Agreement, unless and

until the LOCALITY or the DEPARTMENT has, in writing, received a true copy of such agreement(s) and has affirmatively agreed, in writing, to be bound by such Agreement.

F. Nothing in this Agreement shall be construed as a waiver of the LOCALITY's or the Commonwealth of Virginia's sovereign immunity.

G. Should funding be insufficient and LOCALITY funds be unavailable, both parties will review all available options for moving the project forward, including but not limited to, halting work until additional funds are allocated, revising the project scope to conform to available funds, or cancelling the project.

H. Should the project be cancelled as a result of the lack of funding by the LOCALITY, the LOCALITY shall be responsible for any costs, claims and liabilities associated with the early termination of any construction contract(s) issued pursuant to this agreement.

I. This Agreement may be terminated by either party upon 60 days advance written notice. Eligible expenses incurred through the date of termination shall be reimbursed to the DEPARTMENT subject to the limitations established in this Agreement.

THE LOCALITY and DEPARTMENT acknowledge and agree that this Agreement has been prepared jointly by the parties and shall be construed simply and in accordance with its fair meaning and not strictly for or against any party.

THIS AGREEMENT, when properly executed, shall be binding upon both parties, their successors and assigns.

THIS AGREEMENT may be modified in writing upon mutual agreement of both parties.

IN WITNESS WHEREOF, each party hereto has caused this Agreement to be executed as of the day, month, and year first herein written.

COUNTY OF ISLE OF WIGHT, VIRGINIA:

_____

_____ _____
Typed or Printed Name of Signatory Date

_____
Title

_____ _____
Signature of Witness Date

NOTE: The official signing for the LOCALITY must attach a certified copy of his or her authority to execute this Agreement.

COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION:

_____ _____
Chief of Policy Date
Commonwealth of Virginia
Department of Transportation

_____ _____
Signature of Witness Date

Attachments

Appendix A (UPC 109481)
Appendix B (UPC 109481)

Appendix B

Project Number: 0017-046-683 (UPC 109481) Locality: Isle of Wight County

Project Scope	
Work Description:	#HB2.FY17 Rte. 17 at US Rte. 258 Intersection Capacity Improvements – Add a second, exclusive northbound left-turn lane on U.S. Route 17 to address a heavy left-turning movement and mitigate the potential for queuing vehicles from impeding the through lane during peak period conditions.
From:	0.185 miles South US 258
To:	0.106 miles North US 258

Locality Project Manager Contact Info: Jamie L. Oliver; Phone: 757-365-1653; email: Joliver@isleofwightus.net
Department Project Coordinator Contact Info: John Arms; Phone: 757- 995-5156; email: john.arms@vdot.virginia.gov

Detailed Scope of Services

Locality will furnish a funding shortfall of $53,000 to complete the construction of this project. The project consists of adding a second exclusive northbound left-turn lane on U.S. Route 17 to address a heavy left-turning movement and mitigate the potential for queuing vehicles from impeding the through lane during peak period conditions; adding a tapered left turn lane on U.S. Route 58 to enhance the transition of this heavy movement from eastbound U.S. Route 258/State Route 10/32 to southbound U.S. Route 17; providing a provision for a through lane on to the "The Crossings" development; and providing a left-turn lane on U.S. Route 17 to The Crossings development. The project also includes drainage and traffic signal improvements.

This attachment is certified and made an official attachment to this document by the parties of this agreement

Authorized Locality Official and date

Typed or printed name of person signing

Residency Administrator/PE Manager/District Construction Engineer Recommendation and date

Typed or printed name of person signing

VDOT Administered, Locally Funded Appendix A **Date:** 4/15/2021

Project Number: 0017-046-683 UPC: 109481 CFDA# 20.205 Locality: Isle of Wight County

Project Location ZIP+4: 23314-3509	Locality DUNS # 0101006679	Locality Address (incl ZIP+4): PO Box 80 Isle of Wight, VA 23397-9998

Project Narrative

Work Description:	#HB2.FY17 RTE 17 AT US RTE 258 INT CAPACITY IMPROVEMENTS - Add a second, exclusive northbound left-turn lane on U.S. Route 17 to address a heavy left-turning movement and mitigate the potential for queuing vehicles from impeding the through lane during peak period conditions.
From:	0.185 miles South US 258
To:	0.106 miles North US 258
Locality Project Manager Contact	Jamie L. Oliver; Phone: 757-365-1653; email: joliver@isleofwightus.net
Department Project Manager Contact	John Arms; Phone: 757- 995-5156; email: john.arms@vdot.virginia.gov

Project Estimates

Phase	Estimated Project Costs
Preliminary Engineering	$1,209,300
Right of Way & Utilities	$235,000
Construction	$3,878,242
Total Estimated Cost	$5,322,542

Project Cost and Reimbursement

Phase	Project Allocations	Funds type *(Choose from drop down box)*	Local % Participation for Funds Type	Local Share Amount
Preliminary Engineering	$1,209,300	Smart Scale (HB2)	0%	$0
				$0
Total PE	$1,209,300			$0
Right of Way & Utilities	$235,000	Smart Scale (HB2)	0%	$0
				$0
Total RW	$235,000			$0
Construction	$3,825,242	Smart Scale (HB2)	0%	$0
	$53,000	Local Funds	100%	$53,000
				$0
Total CN	$3,878,242			$53,000
Total Estimated Cost	$5,322,542			$53,000

Total Maximum Reimbursement / Payment by Locality to VDOT	$53,000
Total Maximum Reimbursement by VDOT to Locality (Less Local Share and VDOT Expenditures)	

Project Financing

Smart Scale (HB2)	Local Funds				Aggregate Allocations
$5,269,542	$53,000				$5,322,542

Payment Schedule

FY 2021			
$53,000			

Program and Project Specific Funding Requirements

- All local funds included on this appendix have been formally committed by the local government's board or council resolution subject to appropriation.
- VDOT has billed the LOCALITY $0 for this project as of 4/2/21.
- VDOT has received $0 from the LOCALITY for this project as of 4/2/21.
- **The LOCALITY shall make one lump sum payment to VDOT in the amount of $53,000 no later than 60 days after execution of this agreement/appendix.**
- Project estimate, schedule and commitment to funding are subject to the requirements established in the Commonwealth Transportation Board (CTB) Policy and Guide for Implementation of the SMART SCALE Project Prioritization Process, Code of Virginia, and VDOT's Instructional and Informational Memorandums.
- This Project shall be initiated and at least a portion of the Project's programmed funds expended within one year of the budgeted year of allocation or funding may be subject to reprogramming to other Projects selected through the prioritization process. In the event the Project is not advanced to the next phase of construction when requested by the CTB, the LOCALITY or Metropolitan Planning Organization may be required, pursuant to § 33.2-214 of the Code of Virginia, to reimburse the DEPARTMENT for all state and federal funds expended on the Project.
- This Project has been selected through the Smart Scale (HB2) application and selection process and will remain in the SYIP as a funding priority unless certain conditions set forth in the CTB Policy and Guidelines for Implementation of a Project Prioritization Process arise. Pursuant to the CTB Policy and Guidelines for Implementation of a Project Prioritization Process and the SMART SCALE Reevaluation Guide, this Project will be re-scored and/or the funding decision re-evaluated if any of the following conditions apply: a change in the scope, an estimate increase, or a reduction in the locally/regionally leveraged funds. Applications may not be submitted in a subsequent SMART SCALE prioritization cycle to account for a cost increase on a previously selected Project.

This attachment is certified and made an official attachment to this document by the parties to this agreement

Authorized Locality Official Date

Typed or printed name of person signing

Authorized VDOT Official Date

Typed or printed name of person signing

RESOLUTION TO APPROPRIATE FUNDING FOR THE ROUTE 17 BARTLETT INTERSECTION PROJECT

WHEREAS, the Board of Supervisors has expressed its desire for the Virginia Department of Transportation (VDOT) to construct a Smart Scale project, known as the "Bartlett Intersection project", to add a second exclusive northbound left-turn lane on U.S. Route 17 to address a heavy left-turning movement and mitigate the potential for queuing vehicles from impeding the through lane during peak period conditions, adding a tapered left turn lane on U.S. Route 258 to enhance the transition of this heavy movement from eastbound U.S. Route 258/State Route 10/32 to southbound U.S. Route 17, providing a provision for a through lane on to "The Crossings" development, providing a left-turn lane on U.S. Route 17 to The Crossings development, and also providing drainage and traffic signal improvements; and,

WHEREAS, the Board of Supervisors wishes to fund a projected budget shortfall of $53,000 for the VDOT administered Bartlett Intersection project.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that funds in the amount of fifty three thousand dollars ($53,000) be appropriated from the VDOT Local Match Reserve for Capital Projects to cover the budget shortfall for the Bartlett Intersection project.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 20th day of May, 2021.

_____
Richard L. Grice, Chairman

_____
Carey Mills Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Cooperation Agreement with the Franklin Redevelopment and Housing Authority to Allow Payment in Lieu of Taxes

BACKGROUND:

At its meeting on January 7, 2021, the Board adopted a motion to authorize the Franklin Development and Housing Authority to acquire property in Isle of Wight County for the purpose of providing affordable housing.

Prior to closing on the acquisition of the property, the U.S. Department of Housing and Urban Development is requiring Franklin Redevelopment and Housing Authority to enter into an agreement with the County to provide an annual Payment in Lieu of Taxes (PILT).

Under the agreement the Housing Authority shall make annual payments after the end of the fiscal year in an amount equal to either (i) ten percent (10%) of the Shelter Rent charged by the Housing Authority or (ii) the amount permitted to be paid by applicable state law in effect on the date such payment is made, whichever amount is the lower.

BUDGETARY IMPACT:

N/A

RECOMMENDATION:

Authorize execution of a Cooperation Agreement with the Franklin Redevelopment and Housing Authority to allow Payment in Lieu of Taxes.

ATTACHMENTS:

Description	Type	Upload Date
Cooperative Agreement	Backup Material	5/17/2021

HUD- 52481 COOPERATION AGREEMENT

This Agreement entered into this _____ day of May 2021, by and between The Housing Authority of the City of Franklin (herein called the "Local Authority") and the County of Isle of Wight (herein called the "County[BJ1]"), witnessed:

In consideration of the mutual covenants hereinafter. Set forth, the parties hereto do agree as follows:

1. Whenever used in this Agreement:

(a) The term "Project" shall mean any low-rent housing hereafter developed - or acquired by the Local Authority with financial assistance of the United States of America acting through the Secretary of Housing and Urban Development (herein called the "Government"); excluding, however, any loans and annual contributions entered between the Local Authority and the Government, or its predecessor agencies, prior to the date of this Agreement.
(b) The term "Taxing Body" shall mean the State or any political subdivision or taxing unit thereof in which a Project is situated, and which would have authority to assess or levy real or personal property taxes or to certify such taxes to a taxing body or public officer to be levied for its use and benefit with respect to a Project if it were not exempt from taxation.
(c) The term "Shelter Rent" shall mean the total of all charges to all tenants of a Project for dwelling rents and non-dwelling rents (excluding all other income of such Project), less the cost to the Local Authority of all dwelling and non-dwelling utilities.

2. The Local Authority shall endeavor (a) to secure a contract or contracts with the Government for loans and annual contributions covering one or more Projects comprising approximately 1 unit of low - rent housing and (b) to develop or acquire and administer such Project or Projects, each of which shall be located within the corporate limits of the County. The obligation of the parties hereto shall apply to each such Project.

3. Under the constitution and statutes of the State of Virginia, all projects are exempt from all real and personal property taxes and special assessments levied or imposed by any Taxing Body. With respect to any Project, so long as either (i) such Project is owned by a public body or governmental agency and is used for low - rent housing purposes, or (ii) any contract between the Local Authority and the Government for loans or annual contributions, or both, in connection with such Project remains in force and effect, or (iii) any bonds issued in connection with such Project or any monies due to the Government in connection with such Project remain unpaid, whichever period is the longest, The County agrees that it will not levy or impose any real or personal property taxes or special assessments upon such Project or upon the Local Authority with respect thereto.

4. During such period:

(a) the Local Authority shall make annual payments (herein called "Payments in Lieu of Taxes") in lieu of such taxes and special assessments and in payment for the public services and facilities furnished from time to time without other cost or charge for or with respect to such Project.

(b) Each such annual Payment in Lieu of Taxes shall be made after the end of the fiscal year established for such Project, and shall be in an amount equal to either (i) ten percent (10%) of the Shelter Rent charged by the Local Authority in respect to such Project during such fiscal year or (ii) the amount permitted to be paid by applicable state law in effect on the date such payment is made, whichever amount is the lower.

(c) The County shall distribute the Payments in Lieu of Taxes among the Taxing Bodies in the proportion which the real property taxes which would have been paid to each Taxing Body for such year if the Project were not exempt from taxation bears to the total real property taxes which would have been paid to all of the Taxing Bodies for such year if the project were not exempt from taxation; provided, however, that no payment for any year shall be made to any Taxing Body in excess of the amount of the real property taxes which would have been paid to such Taxing Body for such year if the Project were not exempt from taxation.

(d) Upon failure of the Local Authority to make any Payment in Lieu of Taxes, no lien against any Project or assets of the Local Authority shall attach, -nor shall any interest or penalties accrue or attach on account thereof.

5. During the period commencing with the date of the acquisition of any part of the site or sites of any Project and continuing so long as either (i) such Project is owned by a public body or governmental agency and is used for low - rent housing purposes, or (ii) any contract between the Local Authority and the Government for loans or annual contributions, or both, in connection with such Project remains in force and effect, or (iii) any bonds issued in connection with such Project or any monies due to the Government in connection with such Project remain unpaid, whichever period is the longest, the County without cost or charge to the Local Authority or the tenants of such Project (other than the Payments in Lieu of Taxes) shall:

(a) Furnish or cause to be furnished to the Local Authority and the tenants of such Project public services and facilities of the same character and to the same extent as are furnished from time to time without cost or charge to other dwellings and inhabitants in the County.

(b) Vacate such streets, roads, and alleys within the area of such Project as may be necessary in the development thereof, and convey without charge to the Local Authority such interest as the County may have in such vacated areas and in so far as it is lawfully able to do so without cost or expense to the Local Authority or to the County, cause to be removed from such vacated areas, in so far as it may be necessary, all public or private utility lines and equipment;

(c) In so far as the County may lawfully do so, (i) grant such deviations from the building code of the County as are reasonable and necessary to promote economy and efficiency in the development and administration of such Project, and at the same time safeguard health and safety, and

(ii) make such changes in any zoning of the site and surrounding territory of such Project as are reasonable and necessary for the development and protection of such Project and the surrounding territory.

(d) Accept grants of easements necessary for the development of such Project; and Cooperate with the Local Authority by such other lawful action or ways as the County and the Local Authority may find necessary in connection with the development and administration of such Project.

6 In respect to any Project the County further agrees that within a reasonable time after receipt of a written request therefor from the Local authority.

(a) It will accept the dedication of all interior streets, roads, al - leys, and adjacent sidewalks within the area of such Project, together with all storm and sanitary sewer mains in such dedicated areas, after the Local Authority, at its own expense, has completed the grading, improvement, paving, and installation thereof in accordance with specifications acceptable to the County[BJ2].

7. If by reason of the County's failure or refusal to furnish or cause to be furnished any public services or facilities which it has agreed hereunder to furnish or to cause to be furnished to the Local Authority or to the tenants of any Project, the Local Authority incurs any expense to obtain such services or facilities then the Local Authority may deduct the amount of such expense from any Payments in Lieu of Taxes due or to become due to the County in respect to any Project or any other low - rent housing projects owned or operated by the Local Authority.

8. No Cooperation Agreement heretofore entered between the County and the Local Authority shall be construed to apply to any Project covered by this agreement.

9. No member of the governing body of the County or any other public official of the County who exercises any responsibilities or functions with respect to any Project during his tenure or for one year thereafter shall have any interest, direct or indirect, in any Project or any property included or planned to be included in any project, or any contracts in connection with such Projects or property. If any such governing body member or such other public official of the County involuntarily acquires or had acquired prior to the beginning of his tenure any such interest, he shall immediately disclose such interest to the Local Authority.

10. So long as any contract between the Local Authority and the Government for loans (including preliminary loans) or annual Contributions, or both, in connection with any Project or any monies due to the Government in connection with any Project remains in force and effect, or so long as any bonds issued in connection with any Project remain unpaid, this Agreement shall not be abrogated, changed, or modified without the consent of the Government. The privileges and obligations of the County hereunder shall remain in full force and effect with respect to each Project so long as the beneficial title to such Project is held by the Local Authority or by any other public body or governmental agency, including the Government, authorized by law to engage in the development or administration of low -

rent housing projects. If at any time the beneficial title to, or possession of, any Project is held by such other public body or governmental agency, including the Government, the provisions hereof shall inure to the benefit of and may be enforced by, such other public body or governmental agency, including the Government.

IN WITNESS WHEREOF the County and the Local Authority have respectively signed this Agreement and caused their seals to be affixed and attested as of the day and year above written.

(SEAL) Isle of Wight County, Virginia

By _____
Richard L. Grice, Chairman
Board of Supervisors

Attest:

_____
Carey Mills Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr.
County Attorney

(SEAL) The Housing Authority of the City of Franklin

By _____
_____ (title)

Attest:

_____
_____(title)

ISSUE:

Discussion of RV Use on Private Property

ISSUE:

Discussion of Ancillary Buildings on Residential Property

ISSUE:

Discussion of Regulation of Short-Term Rentals